AVDSP

Video Processor User Manual

VSP 618

RGBlink Science & Technology Co., Ltd.

The pictures and data in the user manual are consult only, if there is fluctuation, according to the real object please!

CONTACT US

Headquarter: S603 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen,Fujian Province, P.R.C

Shenzhen office: Room A05, Floor 4, Building 24, Industry factory Nanshan Science & Technology Park, Shenzhen, Guangdong Province, P.R.C

Tel: +86-592-5771197 Fax：+86-592-5771202

E-mail：rgblinkcs@gmail.com http://www.rgblink.com

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CONTENT

1.0 Safety 1
2.0 Specification 2
2.1 Specification/Parameters 3
3.0 Connection 6
3.1 VSP 618 Back Panel 6
3.2 How to install 8
4.0 Front Panel Keyboard Operation 9
4.1 VSP 618 Operator Guideline 9
4.2 Video Processor Menu 11
5.0 Communication Software Guideline 16
5.1 Install Software 16
5.2 Run AVDSP Console 20
6.0 FAQ 29
6.1 No output in target display 29
6.2 VGA input could not work with AVDSP Console 29
6.3 DVI input could not work with AVDSP 29
6.4 Component input could not work with AVDSP 29
6.5 User settings can not save 30
6.6 Can't update main board software 30
6.7 Display SDI1 or SDI2 in dual display mode 31
6.8 HDMI display shows blue screen 31
6.9 Can't be saved ALPHA value 31
7.0 Quick Start 32
7.1 Single-screen control 32
7.2 Set dual screen fade 34
7.3 Displaying subtitles and LOGO 35
7.4 How to control processor with console software by USB? 40
7.5 How to Use LINSN Ledset software? 44
8.0 Appendix 46
8.1 Appendix Ⅰ Download the main board software 46
8.2 Appendix II Download the IP software 55
8.3 Appendix Ⅲ How to add tasks. 57

1.0 Safety

The general safety information in this summary is for operating person. Any requirement, please feel freely to contact our service engineer.

	Power Source This product is intended to operate from a power source between 85~265 volts rms . This product is only workable under correct power condition, which is already mark on the back panel of the power.
	High Voltage There are many high voltage components inside.
	Do not Remove Covers and Panels Do not remove Covers in any conditions. There are not any spare components inside for maintenance, so do not maintain this product by userrselves, any requirement, please feel free to contact our service engineer. Keep heavy device from power cord.
	Grounding the Product and Use the Proper Fuse This product is grounded through the grounding conductor of the power cord. To Avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals.
	Keep away from Magnet, Motor, TV and Transformer.
	Guard Against Damp Keep using inside clean and dryness environment, once the device get wet, must remove power cord right now.
	Keep away Exploder Do not operate the device inside dangerous and easy explosive gas, which it may make fire, blast or something without expectation.
	Keep away Pour Liquid and Fragment It is forbid to pour liquid, metal fragment or anything else inside this device to avoid fire and other accident. Once that happens, must remove power cord and try to make it clean before power on again.

2.0 Specification

AVDSP series video processors are designed by the latest high performance image processing technology. AVDSP can handle following video without limit, include CVBS（Composite）、S-Video (YC)、YCbCr、YPbPr、RGBHV（VGA）、DVI-D、HDMI、SDI（SD-SDI、HD-SDI） and VOIP（Copper RJ45）.

Compare table of AVDSP as following.

RGBlink AVDSP series video processor compared table									
Parameters		VSP516S	VSP 516H	VSP618	VSP618B	VSP618C	VSP618D	VSP709	VSP 320
Input	COMPOSITE	3x	3x	3x	3x	3x	3x	6x	–
	SVIDEO	1x	1x	1x	1x	1x	1x	2x	–
	SD component YCbCr	1x	1x	1x	1x	1x	1x	2x	–
	SD-SDI	1x	–	–	2x	–	–	–	–
	HD-SDI(SD Compatible)		–	–		–	–	–	–
	DVI	1x	1x	1x	1x	1x	1x	2x	1x
	HDMI	1x	1x	–	–	2x	–	2x	–
	VGA	1x	1x	1x	1x	1x	1x	2x	–
	HD Component YPbPr	1x	1x	1x	1x	1x	1x	2x	–
	Analog Audio	10x	10x	–	–	–	–	2x	–
Output	COMPOSITE	–	–	–	–	–	–	–	–
	SVIDEO	–	–	–	–	–	–	–	–
	SD component YCbCr	–	–	–	–	–	–	–	–
	HD component YPbPr	–	–	–	–	–	–	–	–
	SDI（HD compatible）	–	–	–	–	–	–	1x	–
	VGA	1x	1x	1x	1x	1x	1x	1x	–
	DVI	1x	1x	1x	1x	1x	1x	1x	4x
	HDMI	–	–	–	–	–	1x	1x	–
	Analog Audio	1x	1x	–	–	–	–	1x	–
Function & service	Fade in fade out	–	–	√	√	√	√	√	–
	image processing	10bit	10bit	10bit	10bit	10bit	10bit	10bit	–
	Motion Compensation	nice	nice	good	good	good	good	good	–
	Brightness	√	√	√	√	√	√	√	–
	Gamma	√	√	√	√	√	√	√	–
	Remote control	√	√	√	√	√	√	√	–
	Schedule play	√	√	√	√	√	√	√	–
	Dual display	√	√	√	√	√	√	√	–
	Quad Display	–	–	–	–	–	–	√	–
	Pixel based scale	√	√	√	√	√	√	√	–
	Image shift	–	√	√	√	√	√	√	–
	Subtitle overlay	–	–	√	√	√	√	√	–
	Logo overlay	–	–	√	√	√	√	√	–
	Output Resolution	1280×1024	1920×1080	2048×1152	2048×1152	2048×1152	2048×1152	2048×1152	5760*900;1
	Image refresh frequency	60Hz	60Hz,75Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	60Hz
	image exchange	√	√	√	√	√	√	√	–
	image copy	√	√	√	√	√	√	√	–
	Front panel Operation	32key	32key	32key	32key	32key	32key	32key	–
	digital clock	√	√	√	√	√	√	√	–
	control interface	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	RS232+TCP/IP	RS232
	control software	√	√	√	√	√	√	√	√
	Standard 1U rack mount	√	√	√	√	√	√	√	√
	Net weight	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	1Kg
	CE certification	√	√	√	√	√	√	√	√
	FCC certification	√	√	√	√	√	√	√	√
	RoHS certification	√	√	√	√	√	√	√	√

2.1 Specification/Parameters

Composite BNC Input	
Number of Inputs	3
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75ohm
Multiplex	YCbCr
S-video DIN4 Input	
Number of Inputs	1
Supported Standards	PAL/NTSC
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm U/V:0.7Vpp±3dB 75ohm
YPbPr BNC Input	
Number of Inpus	BNC*3
Supported Standards	analog HD input
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm Pb/Pr:0.7Vpp±3dB 75ohm
VGA DB15 Input	
Number of Inputs	1
connetor	Standard DB15 socket
Supported Standards	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level：300mV Sync-tip：0V
DVI Input	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Standards	SMPTE：625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC, 1080i50, 1080i59.94/60, 720p50 720p59.94/60 VESA： 800×600×60Hz， 1024×768×60Hz，1280×768×60Hz ， 1280×1024×60Hz ，1600×1200×60Hz ， 1920×1080×60Hz ，1920×1080×50Hz
Signal Level	TMDS pwl，single pixel input，165MHz bandwidth
Standard	DVI 1.1
SDI Input	
Number of Inputs	2
Connetor	BNC
Data Rate Range	19.4Mbps~1.5Gbps
Supported Standards	ITU-R BT.656,ITU-R BT.601,SMPTE 259M,

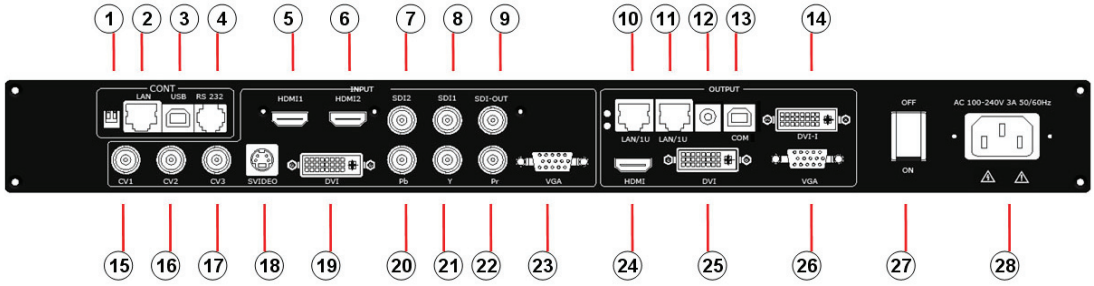
	SMPTE 292, SMPTE 297
Equalization）	Belden 1694A 100M HD1.485G， 350m SD 270Mbps
SDI Loop-out	
Number of Loop-Throughs	1
Signal Level	800mV±10%
DC Offset	0V±0.5V
Rise/Fall Time	HD1.485Gbps<270 ps； SD 270 Mbps 0.4 ns~1.5ns
Overshoot	<10%
Timing Jitter	SD<0.2UI；HD<1.0UI
Alignment Jitter	<0.2UI
HDMI Input	
Number of Inputs	2
Connector	HDMI (standard type A interface)
Supported Standards	SMPTE：625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC, 1080i50, 1080i59.94/60, 720p50 ，720p59.94/60 VESA： 800×600×60Hz， 1024×768×60Hz，1280×768×60Hz ， 1280×1024×60Hz ，1600×1200×60Hz ， 1920×1080×60Hz ，1920×1080×50Hz
Signal Level	TMDS pwl，single pixel input，165MHz bandwidth
Standard	HDMI 1.3
SDI Loop-out	
Number of Loop-Throughs	1
Signal Level	800mV±10%
DC Offset	0V±0.5V
Rise/Fall Time	HD1.485Gbps<270 ps； SD270 Mbps 0.4 ns~1.5ns
Overshoot	<10%
Timing Jitter	SD<0.2UI；HD<1.0UI
Alignment Jitter	<0.2UI
DVI Output	
Number of Inputs	1
connetor	Standard DVI-I interface
Supported Resolution	800×600×60Hz ， 1024×768×60Hz ，1024×768×75Hz ， 1280×768×60Hz ，1280×1024×60Hz ， 1440×900×60Hz ，1400×1200×60Hz ， 1600×1200×60Hz ，1920×1080×60Hz ， 1920×1200×60Hz ，2048×1152×60Hz

Signal Level	TMDS pwl，165MHz bandwidth
VGA Output	
Number of Inputs	1
connetor	Standard DB15 socket
Supported Resolution	800×600×60Hz ， 1024×768×60Hz ， 1024×768×75Hz ， 1280×768×60Hz ， 1280×1024×60Hz ， 1440×900×60Hz ， 1400×1200×60Hz ， 1600×1200×60Hz ， 1920×1080×60Hz ， 1920×1200×60Hz ， 2048×1152×60Hz，2048×1536×60Hz
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm black level：300mV Sync-tip：0V
HDMI Output	
Number of Outputs	1
Connetor	HDMI (standard type A interface)
Supported Standards	800×600×60Hz ， 1024×768×60Hz ， 1024×768×75Hz ， 1280×768×60Hz ， 1280×1024×60Hz ， 1440×900×60Hz ， 1400×1200×60Hz ， 1600×1200×60Hz ， 1920×1080×60Hz ， 1920×1200×60Hz ， 2048×1152×60Hz
Signal Level	TMDS pwl，165MHz bandwidth
Function	
Source Switch	Support every signal with alpha key operation
PIP	PIP for SD with HD and HD with HD
Alpha Key	support
Extras	
Communication	RS232 TCP/IP
Power Supply	85-264V 2A IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	1year

Note:	**Specifications are subject to change without notice.**

3.0 Connection

3.1 VSP 618 Back Panel



1、Dial the code switch；

2、10/100M interface (copper RJ45). Used to connect the computer by 568B-568A twist-pair

3、USB interface，Used to connect the computer

4、RS232 interface (RJ11) for AVDSP processor. Used to connect the computer;

5-6、HDMI input interface。Input the signal from HD player, DVD, computer, and so on.

7-8、SDI Input BNC, used to support SD/HD SDI input。Input the video signal from the HD player, HD projector. It can connect to the 7 or 8 interface on the next VSP618,using the 75ohm BNC.

9、SDI loop out BNC, used to loop input SDI signal to next SDI player.

10-11、Gigabit copper port, connect to LED screen.

12、Gigabit Transmitter card power interface, not use inside case;

13、Gigabit Transmitter card USB control interface;

14、Gigabit Transmitter card DVI input，connect to DVI output of VSP 618;
（This Connection does not support hot-plugging）

15-17、Composite input interface，Composite BNC. Used to input composite signal （PAL, NTSC, SECAM compatible）;

18、S-Video DIN 4, used to input S-Video signal（PAL, NTSC, SECAM compatible）;

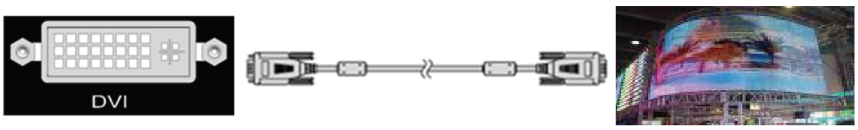
19、DVI input interface。Input the video signal from computer, DVI signal generator. Connect to the same DVI interface on VSP;
（This Connection does not support hot-plugging）

20-22、R/Pr G/Y B/Pb BNC, used to support SD/HD progressive input, up to 1080p60;

23、VGA input interface, DB-15, used to support Analog RGB input; connect to the VGA interface on VSP;

24、HDMI output, use to connect with HDMI monitor or HDMI player;

25、DVI output，connect to the monitor or LED display with DVI interface.
（This Connection does not support hot-plugging）

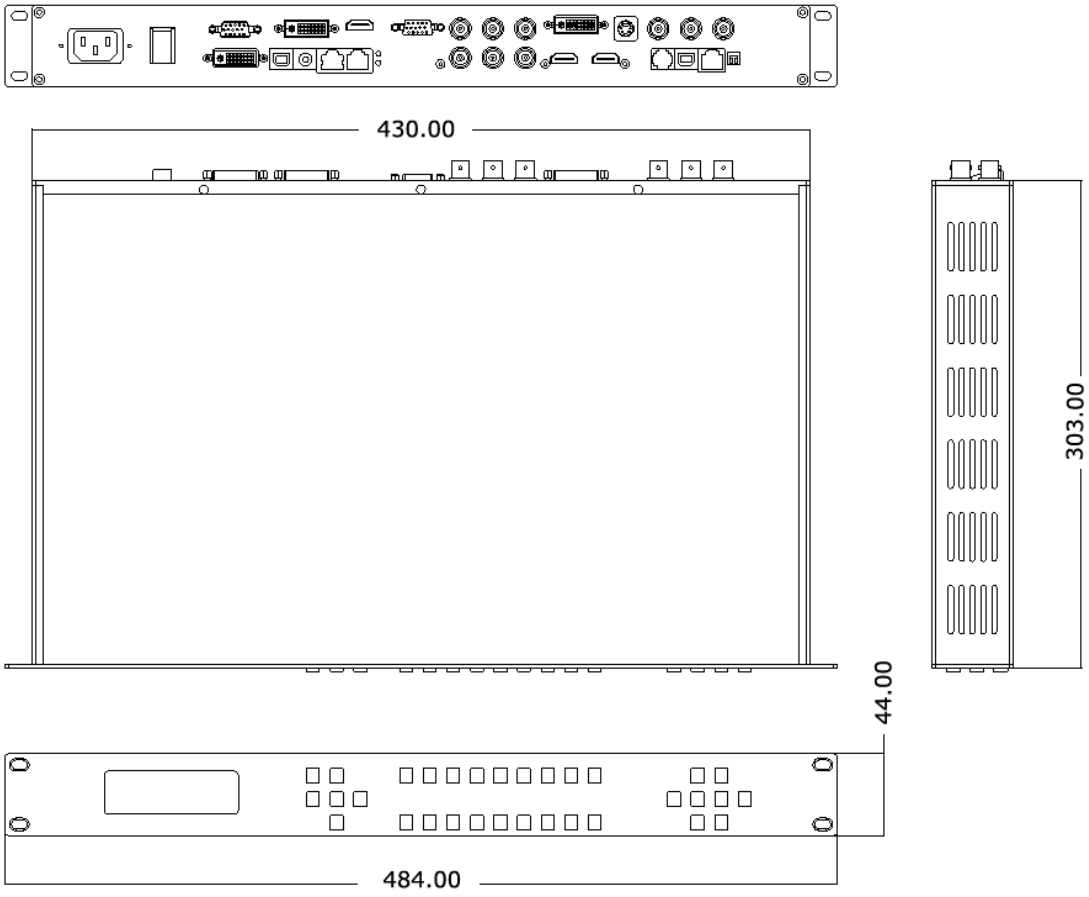


26、VGA output interface, connect to the monitor, projector and so on；

27~28、Switch and power. It must use IEC-3 power line. Always ground to avoid electric shock.

3.2 How to install

VSP 618 frame size



4.0 Front Panel Keyboard Operation

Insert power cord and push power to ON position. LCD module on the front panel will show RGBLINK and go into self verification before it load last setting config and send processed image to the target monitor. For the first setup, CV1 input is default source. With front panel keyboard, user can operate VSP with menu display on LCD module.

4.1 VSP 618 Operator Guideline

VSP 618 front panel as following：

1、LCD Module;

2、Keyboard:

ESC: push to exit from current choice item;

SEL: push to confirm the current choice item;

UP: push to select up items;

DOWN: push to select down items;

LEFT：push to select left items;

RIGHT：push to select right items;

CV1：switch to composite 1 input;

CV2：switch to composite 2 input;

CV3：switch to composite 3 input;

SVID：switch to　s-video input;

YCbCr：switch to standard definition input;

VGA: switch to analog RGB input;

YPbPr: switch to high definition component;

DVI: Switch to DVI input;

SDI1：switch to SDI1 input;

SDI2：switch to SDI 2 input;

HDMI1：switch to HDMI 1 input;

HDMI2：switch to HDMI 2 input;

SAVE1：switch to use the user-defined mode 1;

SAVE2：switch to use the user-defined mode 2;

PBP：switch to show two pictures beside on beside;

PIP：switch to show picture in picture on the screen. CV1 is the default small picture on the top left corner, DVI is the default picture full screen;

POP：switch to show picture out picture on the screen;

FS：switch to selet full screen or zoom view, just for single picture mode;

MENU: push to go to main menu;

FRE：push to freeze the video image or live again （Freeze→Live→Freeze）

AB: push to switch between front picture and back picture if works in dual channel mode with alpha key, front picture will alpha key in step by step and back picture key out step by step;

SCALE: push to go to between scale→zoom→crop→scale mode;

BRT：push to adjust the brightness and the contrast ratio, push to enter to the relevant Menu, and then push the UP and DOWN to adjust the brightness and the contrast ratio;

OUT: push to select the output format by using the UP and DOWN;

I/II: push to set single or dual channe;

SAVE: push to save current config;

4.2 Video Processor Menu

System menu as follows;

Fig. 1

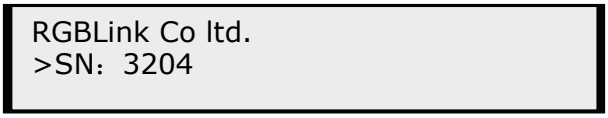
The first line shows VSP 618.

Push the right and left direction key to select the left or right menu. Before the menu item, if there is a * sign, means the menu item has been selected; you can push the Select key to enter it.

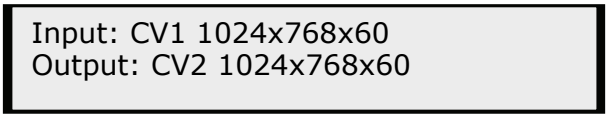
The ↑ on the right means you can select the menu items by pushing the up and down direction key.

User can check the information of the equipment in "Dev Info" menu (including the manufacturer、serial-number);

User can get more service and support according to the serial-number.



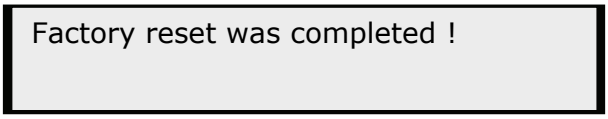
User can check current input and output sources in Dev Info menu also.



Touch UP/DOWN to check customer service E-mail and web site address; User can visit company web site for more product information.

Touch UP/DOWN to check System time

User can do a Factory Settings in Recall menu, after successful reset you will see the menu as follows:



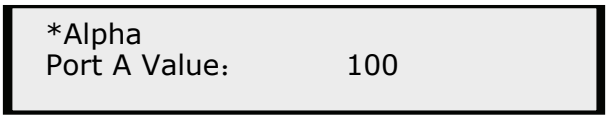
Push the MENU to enter the main menu, and then push up and down direction key, the menu as follows:

Push the LEFT/RIGHT to select the relevant submenu.

LANGUAGE submenu as follows:

Push UP/DWON to enter Alpha setup, user can set value from 0 to 100, 0 means video or graphic would be disappear and 100 means normal;

Port A and Port B stand for two channel picture;



Push OUT to enter the Output menu, push the UP or DOWN to select different output resolution, push OK to confirm the output resolution.

Advance submenu as follows:

Added adjustable feature of DE:

Press UP/DOWN and select the menu as shown in Figure 1:

Figure 1

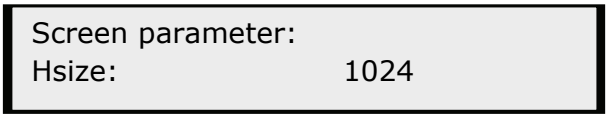
Press LEFT/RIGHTand select XY_Pos to enter the submenu of adjusting effective area;

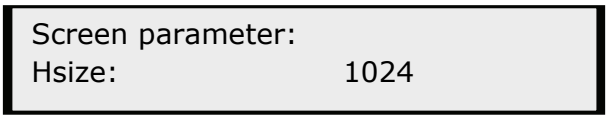
XY_Pos：The sub-menu of which is used to adjust the position of overall effective area shown on the screen or monitor.

H_BLANK: The overall effective area can be moved around by adjusting the value of H_BLANK.

V_BLANK:The overall effective area can be moved up and down by adjusting the value of V_BLANK.

Note：	Added adjustable feature of DE，support the following resolution：
	"800x600x60 Hz "、"1024x768x60 Hz "、"1024x768x75 Hz "
	"1280x1024x60 Hz "、"1400x1050x60 Hz "、"1600x1200x60 Hz "





Step：user can set the step of scale;

HSize：set the horizontal size of the image;

VSize：set the vertical size of the image;

HPos：set the horizontal position of the image;

VPos：set the vertical position of the image;

User can set size and position of the screen simply, Mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen。

Push the Ⅰ/Ⅱ to enter Single or Dual channel menu , push the UP / DOWN to select the single or dual channel, push SEL to confirm the single channel or dual channel work state;

Select the input channel, push the UP/DOWN, and SEL to confirm the different input channel. User can also push the channel name on the keyboard to go into the input channel.

AB in VSP618 is for two image Alpha in and out.

OR：

Push SCALE to set the size and position of the image, push UP/DOWN and SEL to confirm the relevant items;

Step：user can set the step of scale;

HSize：set the horizontal size of the image;

VSize：set the vertical size of the image;

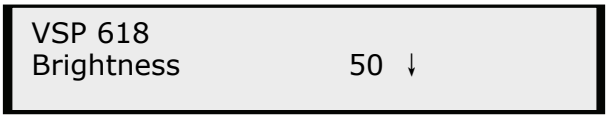
HPos：set the horizontal position of the image;

VPos：set the vertical position of the image；

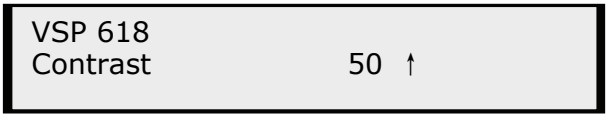
Push the FRE to freeze the live image or live the freeze image.

OR：

Push BRT to set the brightness and the contrast ratio:



OR：



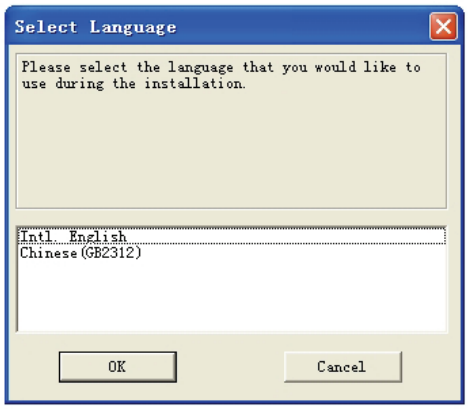
Push SAVE and then push SAVE1 or SAVE2 to save the operation to SAVE1 or SAVE2;Push SAVE1 or SAVE2 to execute relative operation after user save the operation sucessfully.

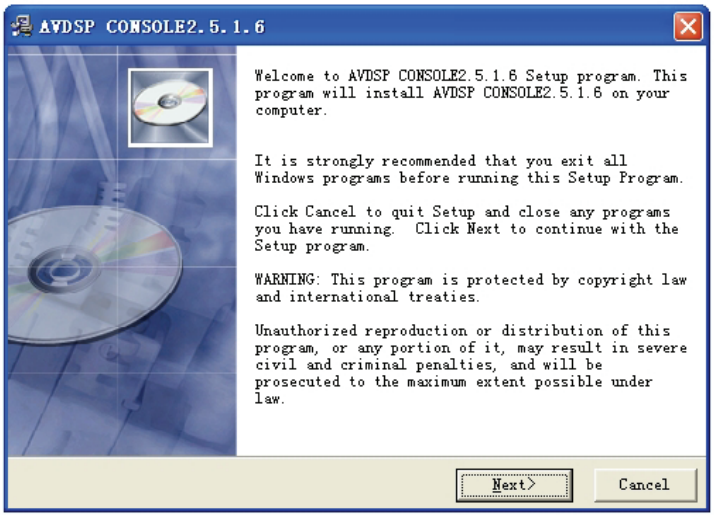
5.0 Communication Software Guideline

AVDSP video processor is very easy to be configured with user friendly communication software, support drag and drop operation for edit and display. Also can customized with schedule function.

5.1 Install Software

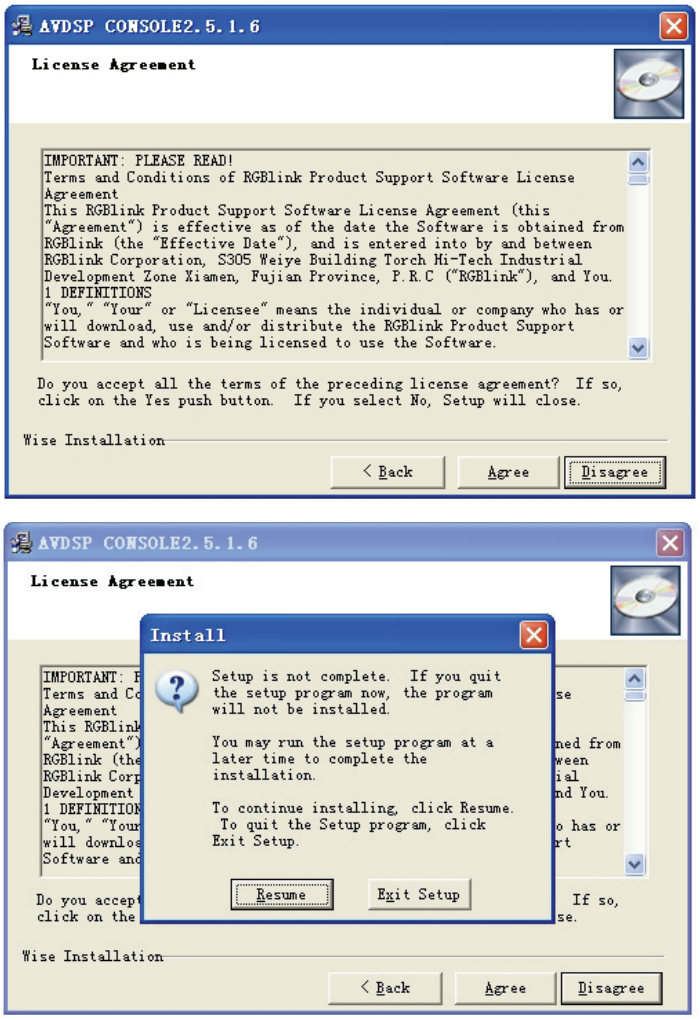
Dual click AVDSP.exe to install, select Chinese or English version for use, after click "select "to next dialog.



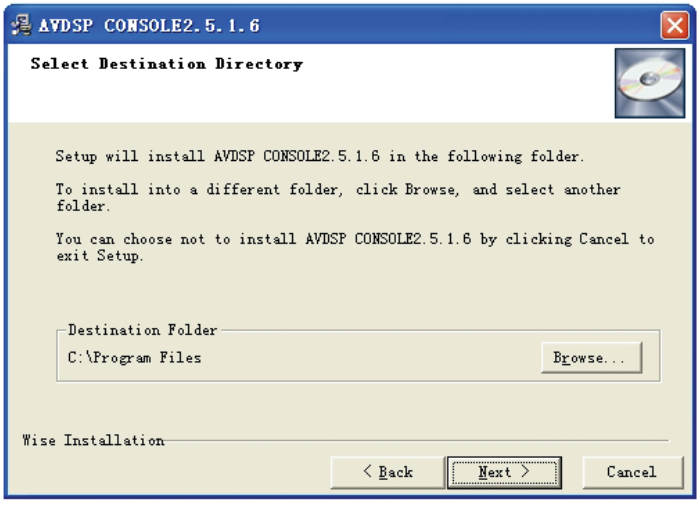

AVDSP CONSOLE2.5.1.6
Welcome to AVDSP CONSOLE2.5.1.6 Setup program. This program will install AVDSP CONSOLE2.5.1.6 on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup Program.
Click Cancel to quit Setup and close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next>
Cancel

If user agree to install this software, please click next to go on, else click esc to exit this install.

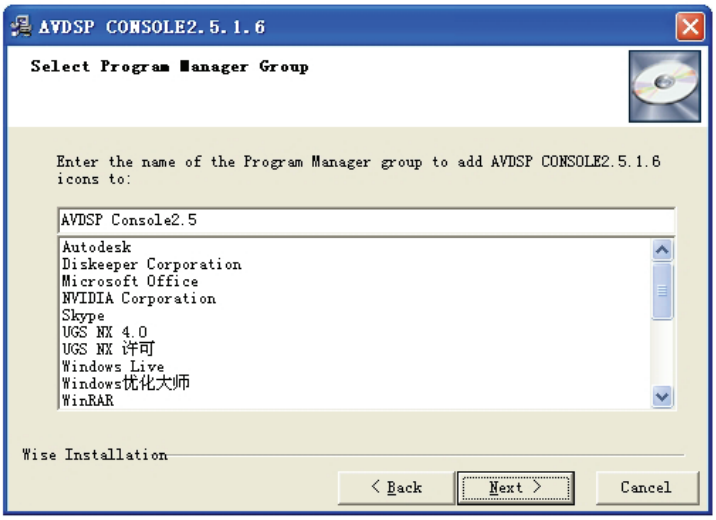
And in next dialog is the user agreement of the software, click agree to go on and refuse to exit.


AVDSP CONSOLE2.5.1.6
License Agreement
IMPORTANT: PLEASE READ!
Terms and Conditions of RGBlink Product Support Software License Agreement
This RGBlink Product Support Software License Agreement (this "Agreement") is effective as of the date the Software is obtained from RGBlink (the "Effective Date"), and is entered into by and between RGBlink Corporation, S305 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C ("RGBlink"), and You.
1 DEFINITIONS
"You," "Your" or "Licensee" means the individual or company who has or will download, use and/or distribute the RGBlink Product Support Software and who is being licensed to use the Software.
Do you accept all the terms of the preceding license agreement? If so, click on the Yes push button. If you select No, Setup will close.
Wise Installation
< Back
Agree
Disagree
AVDSP CONSOLE2.5.1.6
License Agreement
Install
Setup is not complete. If you quit the setup program now, the program will not be installed.
You may run the setup program at a later time to complete the installation.
To continue installing, click Resume. To quit the Setup program, click Exit Setup.
Resume
Exit Setup
Wise Installation
< Back
Agree
Disagree

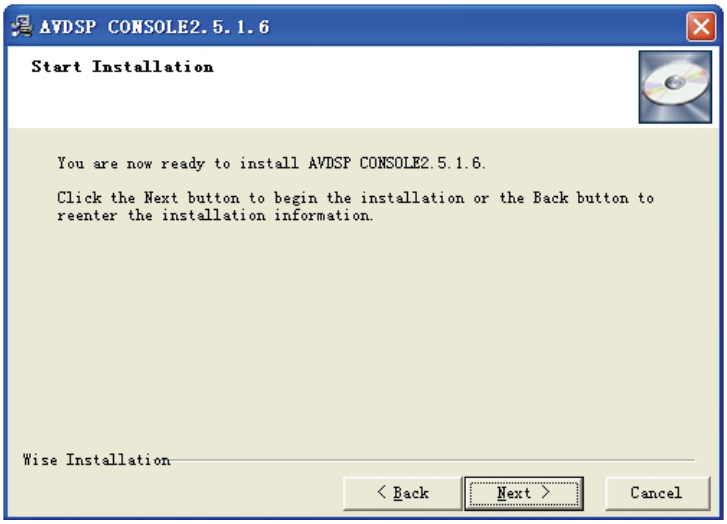
If users agree to the agreement, user can select install directory in next dialog, else, click next to install software to default directory "C:\Program Files".

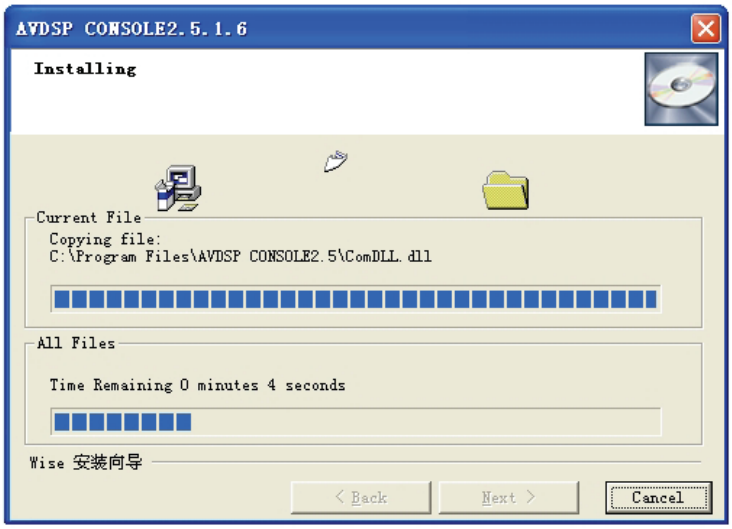

AVDSP CONSOLE2.5.1.6
Select Destination Directory
Setup will install AVDSP CONSOLE2.5.1.6 in the following folder.
To install into a different folder, click Browse, and select another folder.
You can choose not to install AVDSP CONSOLE2.5.1.6 by clicking Cancel to exit Setup.
Destination Folder
C:\Program Files
Browse...
Wise Installation
< Back
Next >
Cancel

Click "next"to go on.

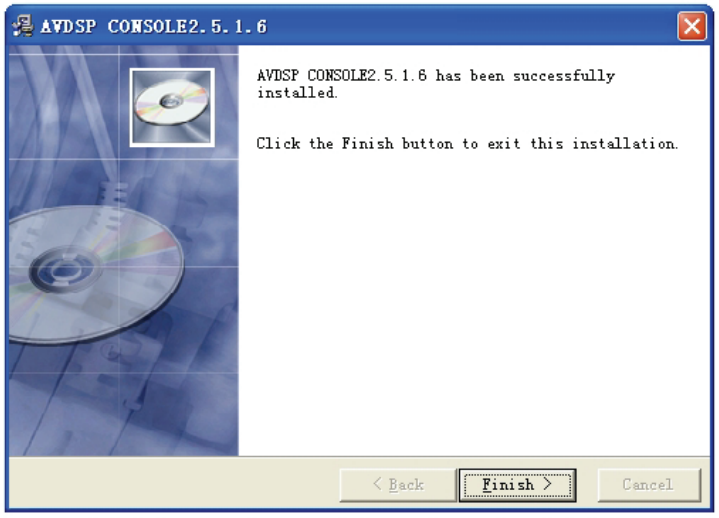


Click “next” to go on.


AVDSP CONSOLE2.5.1.6
Start Installation
You are now ready to install AVDSP CONSOLE2.5.1.6.
Click the Next button to begin the installation or the Back button to reenter the installation information.
Wise Installation
< Back
Next >
Cancel

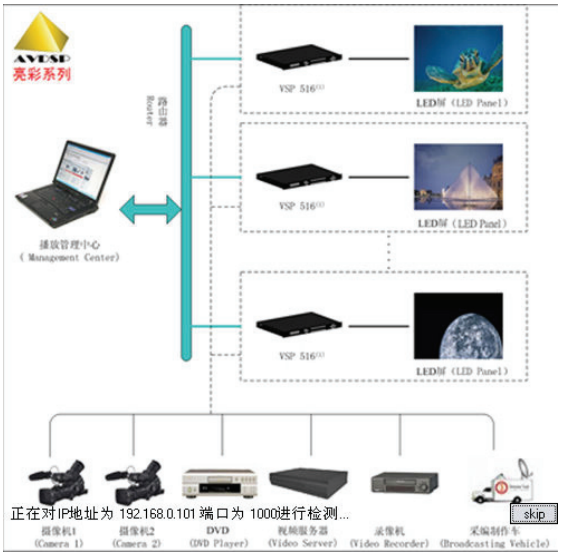


Click “finish” and ready to run AVDSP console.

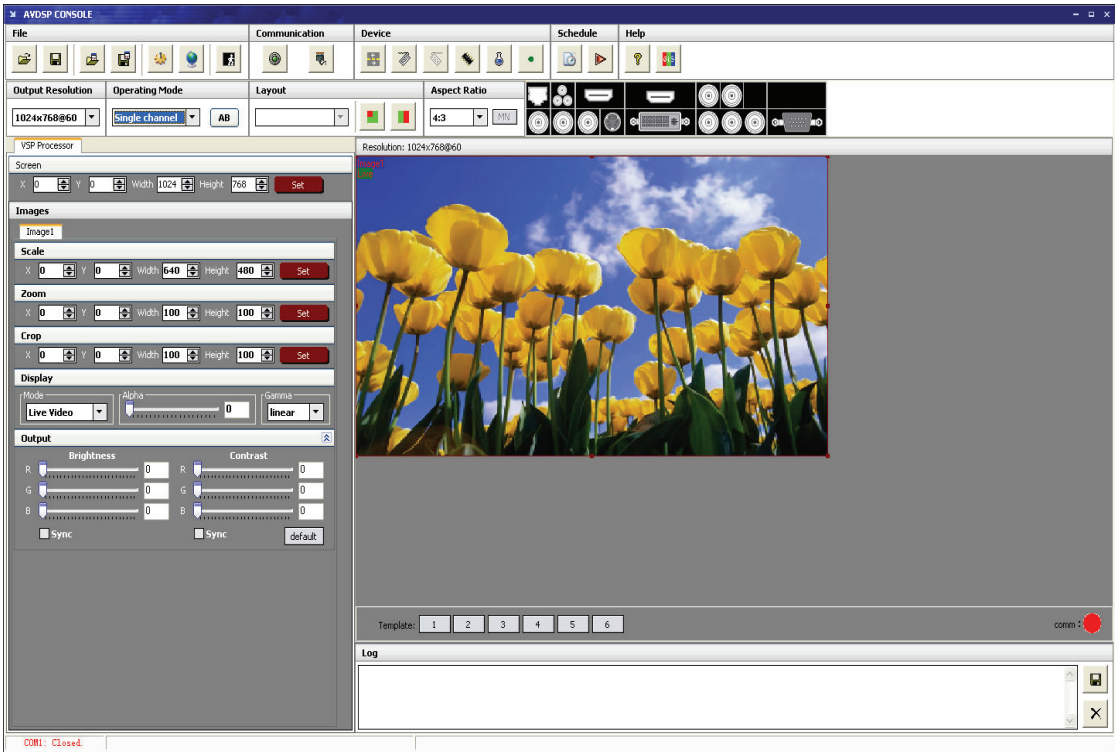

AVDSP CONSOLE2.5.1.6
AVDSP CONSOLE2.5.1.6 has been successfully installed.
Click the Finish button to exit this installation.
< Back
Finish >
Cancel

5.2 Run AVDSP Console

Run AVDSP.exe and the console will auto detect device in serial or networks by detected Comm port and pro-define IP address.



After detect, open the device console, for example, if the device is VSP 618, then VSP 618 console will be load, as following. Default loading is VSP 516 if can not detect any device.

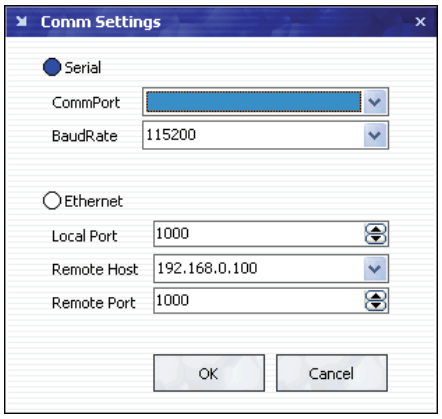


Setup Communication

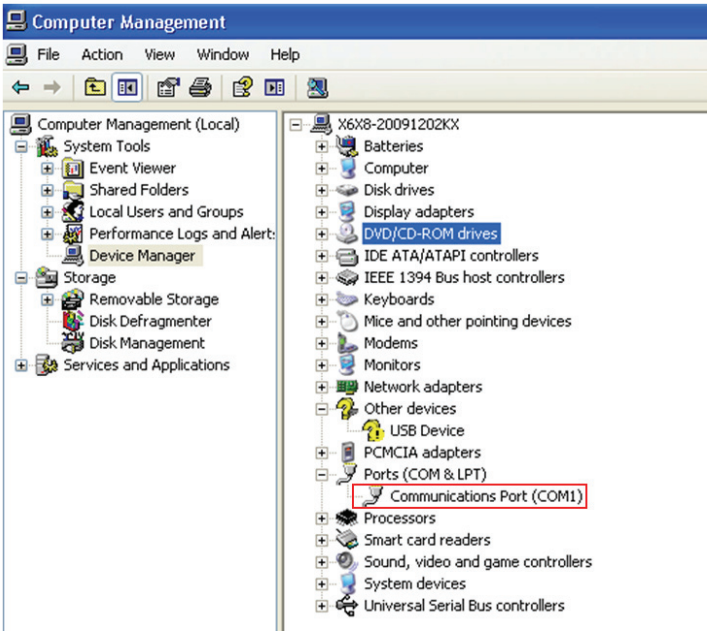
AVDSP Console support COM port or Ethernet (UDP) to access AVDSP.For the first running ,user must click the to close COM Port. Click to change the COM Port and the Baudrate.

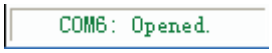
Serial: user can make choice between existent com ports and baud rates; default Baudrate is 115200.

Ethernet: user can fill any number less than 1023 in Local Port. The Remote Port must be 192.168.0.100 and the Remote Port must be 1000.



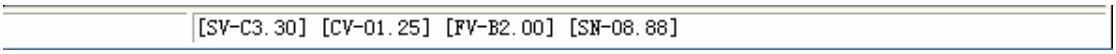
The COM Port is decided by user's COM. Right click my computer icon on desktop, select Hardware→Device Manager in the system attributes dialog. The COM in red in the picture is the COM user can make choice.



Then click to open COM. 

will display after success to connect the COM.

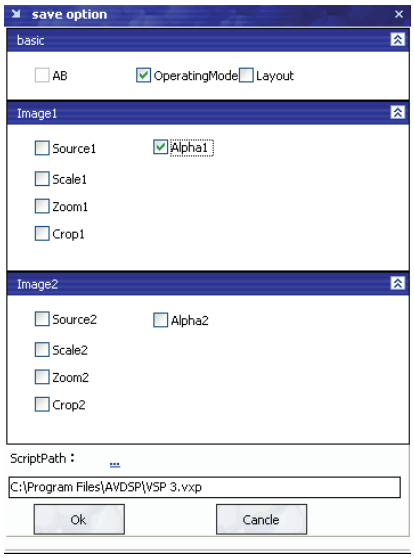
If AVDSP console success to detect device in chain, the software version, device core version, firmware version and serial number will display on the bottom right corner of the screen.



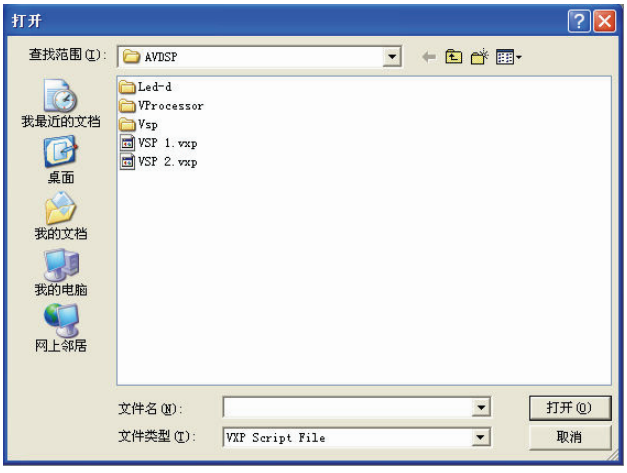
5 How to use

Operator can check parameters by software.

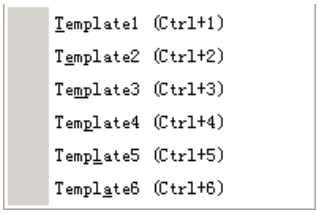
: Save script. Save current user config parameters as script.



: Open script. User can open saved script.



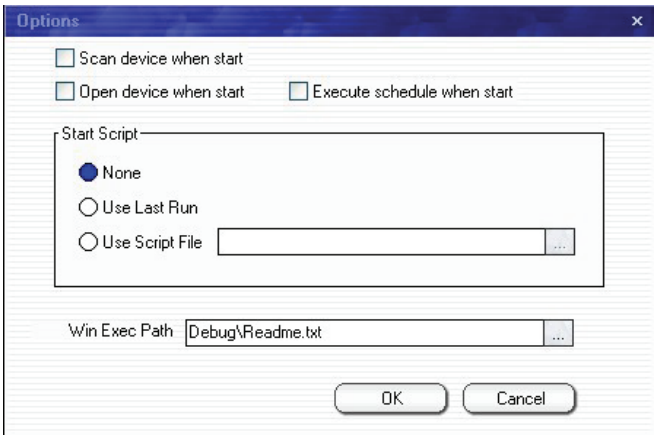
: Import template. There are six templates for user.



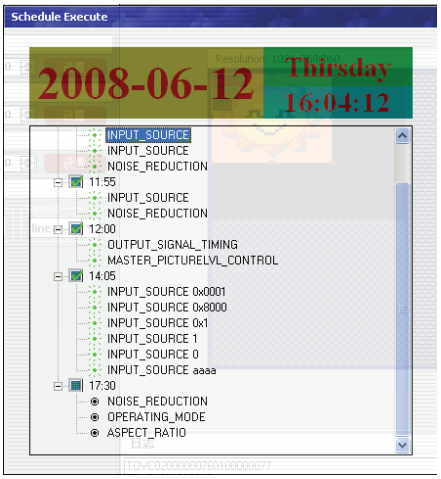
: Export template. Export current config as template.

: Option. User can choose open device when start and using script saved before or execute schedule edited before when start.

If user choose open device when start, user can use last run, use script file or none when user start. User can click to choose which script user want to open.



If user choose execute schedule when start, the next dialogue will display when software run.



: Language. The software supports Chinese and English version. The picture following is the Chinese dialogue.

: Exit.

Communication

: Open COM.

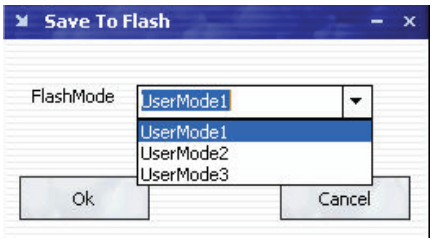
: Close COM.

: Set COM.

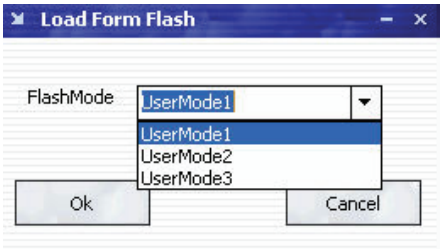
Device

: Synchronization.

: Save to flash.



: Load form Flash.



Load user config from flash, if 618, there are only 2 user mode; For 709, there are only one user mode.

: Factory setup

: Advance, for adm. inistrator control.

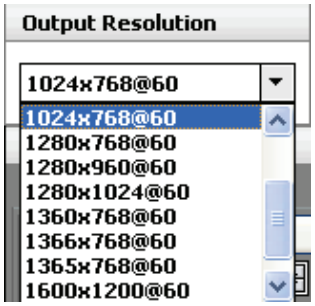
: Execute schedule or stop schedule.

Help

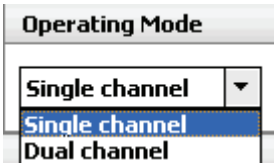
: Help. Display helps dialogue.

: About.

Output resolution: user can choose different output resolution by selecting from pull down list.

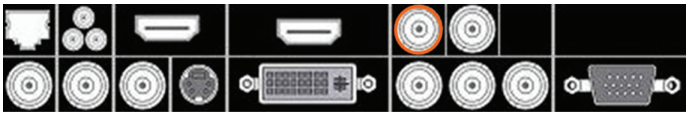


Operating mode: choose to work in single channel or dual channel.



Layout: if in dual channel mode, user can set the device to work in PIP or PBP mode directly with quick preset layout button as following.

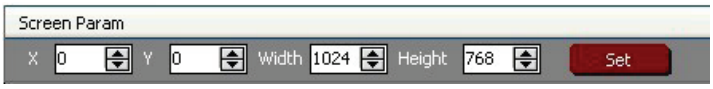
Input: the white area display the name of input interface when the mouse is over the interface picture on the left. The orange pane means current selected interface.



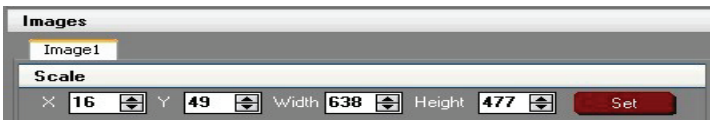
If work in dual channel, channel 1 includes VOIP, CV1, CV2, CV3, SVideo, YCbCr, SDI 1 and SDI 2, and channel 2 includes DVI, YPbPr, VGA, HDMI1 and HDMI 2. The cross over interface picture means they can not access. The orange pane means selected interface for channel 1. The blue pane means selected interface for channel 2.

Screen parameter:

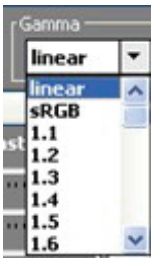
User can set size and position of the screen simply, Mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen。



Images: User can scale the images；Image 2 can't choose in single channel mode.

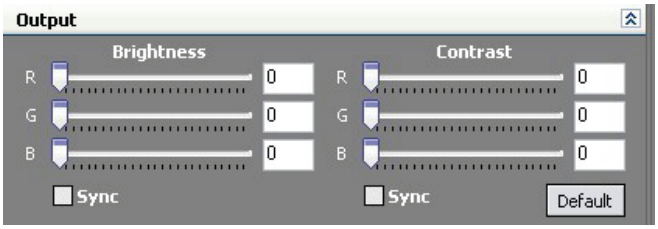


Display Toolbar：

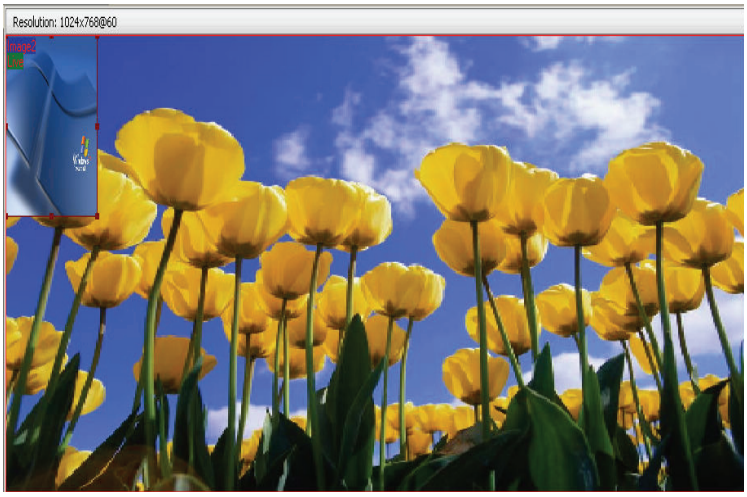


Display toolbar Users can set Alpha value of "dynamic Video" and "static current frame" through display toolbar.
Setting Gamma is generally not recommended, since LED large screen itself has Gamma function.
For further information, users can contact with our customer service team.

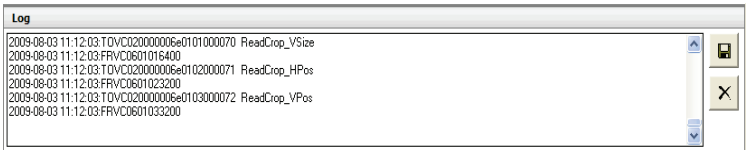
Output: user can customize the brightness and the contrast.



Display: user can customize image or images position and size just by drag and drop image (images) in this area. This process is sync to the parameters in images toolbars.



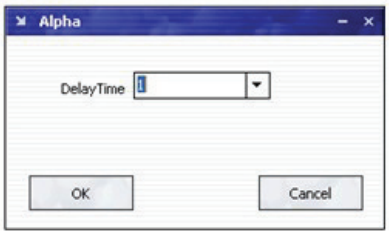
Log: user can save or delete the operate log file.



Added functions

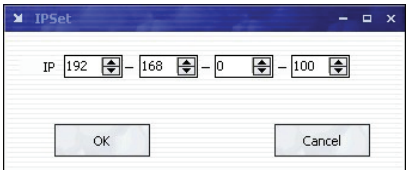
- **Alpha delay time**

Alpha can set AB button Fade effect.



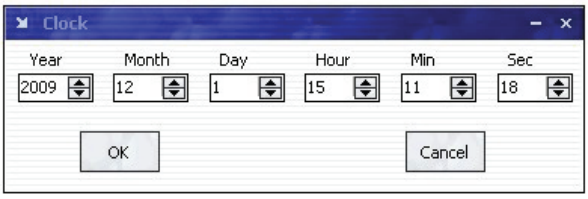
- **IP set**

Users can set equipment IP, Usually used under the condition of one computer control or remote control several computers.



- **Clock**

Users can set or adjust lower computer time through" clock"

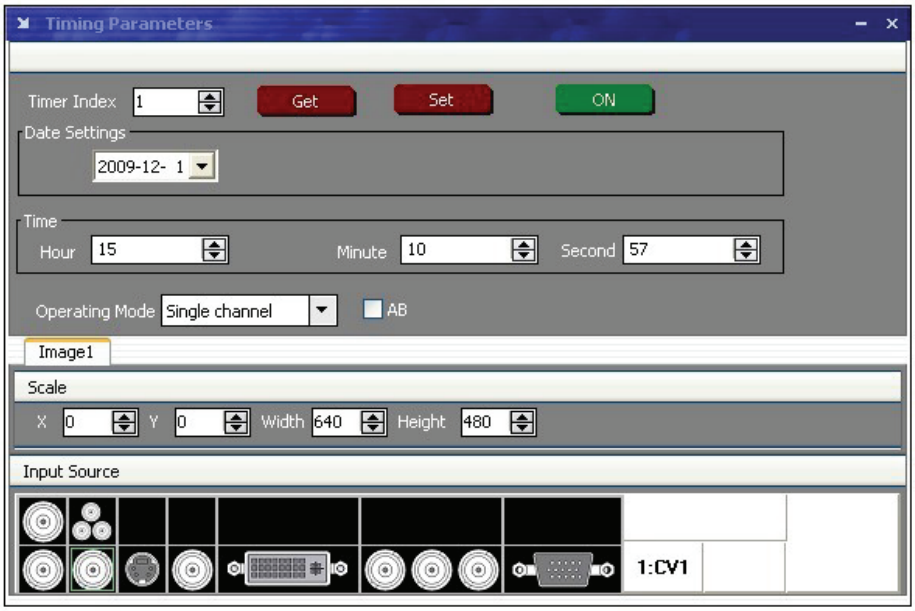


- **Equipment Schedule function**

Users can set device to work with schedule, and then device can automatically switch between single or dual channel, resize image, switch video and with fade effect in need.

Equipment currently supports max 10 regular content; users can set in the "timing" option.

Specifically how to implement devising schedule function, please refer to Appendix Ⅲ.



6.0 FAQ

6.1 No output in target display

1) Check the output config of the input video.

2) Check the input channel config is ok. Ex.The composite 1 interface is connected to the composite interface of video source.

3) Check the connection of output is ok.

4) Check the target monitor or display is not destroied or power down.

5）Check the output resolution of AVDSP is not out of the maximal resolution of target display.

6) Check ALPHA value is not 0.

7）Any requirement, please feel free to contact our customer service engineer.

6.2 VGA input could not work with AVDSP Console

1）Check VGA source output is ok.

2）Check VGA input resolution is not out of AVDSP Console support list, as following. The biggest input resolution is 1024*768*60Hz

3) Check AVDSP Console works in VGA input mode.

4) Any requirement, please feel free to contact our customer service engineer.

6.3 DVI input could not work with AVDSP

1) Check DVI source is ok.

2) Check DVI source output is not out of AVDSP support list.

3) Check AVDSP works in DVI input mode.

4) Check the connection between AVDSP and DVI source is correct. Restart DVI source and check output.

5) Any requirement, please feel free to contact our customer service engineer.

6.4 Component input could not work with AVDSP

1) Check the connection between AVDSP and Component source is correct.

Especially Y signal. Refer to cabling example in page 5. High Definition component YPbPr is only support in YPbPr input。Standard definition YCbCr support 480i and 576i only; High Definition YPbPr support 480i、576i、480P、576P、720P50、720P60、1080i50 and 1080i60;

2) Check component source works, normally DVD component output should be open from its menu.

3) No recommend to output component and SVideo input from the same source.

4) Any requirement, please feel free to contact our customer service engineer.

6.5 User settings can not save

VSP 618 supports multi config mode. For multi config mode, the equipment starts to work automatically with the SAVE1 mode. According to different equipments, you can solve the problems that modes can't be saved by the following steps.

VSP618

Confirm to press the "SAVE" button, then press "SAVE1",or "SAVE2", that will save the current operation mode to the "user mode 1",or "user mode 2", after that, gently push button "SAVE1",""SAVE2, it will call out the corresponding setting of user-mode. If that, the saving is successful.
After saving process, user should not do factory reset or any saving operation to user mode 1, otherwise, "SAVE1" will be over write.

6.6 Can't update main board software

Connect the computer and AVDSP Series, select *.mot. Download file to device. After the equipment power up, right-click the ".mot" file at the left side of menu, when the screen shows "waiting for update", you can update the main board program. Next, choose the "download file to device", start to loading.

6.7 Display SDI1 or SDI2 in dual display mode

The way to display SDI1 or SDI2 in dual display mode: select SDI1 or SDI2 when in single display mode, press Ⅰ/Ⅱ to enter into dual display mode then select SDI1 or SDI2 as source signal

6.8 HDMI display shows blue screen

In dual channel and the picture composition is: SDI+HDMI(including SDI1, SDI2 and HDMI1, HDMI2 combine together), switching between SDI1 and SDI2, or other signals switching to SDI1 or SDI2, when HDMI display shows blue screen, then user needs to reselect the HDMI working signal.

6.9 Can’t be saved ALPHA value

ALPHA value can’t be saved when operating the AB key on the front panel to do FADE IN FADE OUT, so user has to revise the corresponding value in the Advanced Menu to save it.

7.0 Quick Start

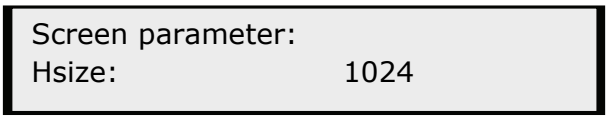
7.1 Single-screen control

Set screen parameters

Users can easily change the screen size and location by setting the parameters with keyboard and LCD menu.

Press MENU to access main menu, Menu shows as below picture：

Press UP / DOWN button to turn the menu shown as below pictures：



Step： Set the unit of zoom and move every time；

HSize：Set Horizontal size；VSize：Set vertical size；

Hpos：Set horizontal coordinates(horizontal phase)；

VPos：Set vertical size(vertical phase)；

Scale pictures

Step：Set the unit of scale and move every time; (Three steps available:1, 10,100)

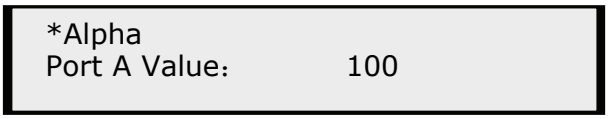
HSize：Set horizontal size; VSize：Set vertical size;

HPos：Set horizontal coordinates(horizontal phase)；

VPos：Set vertical size(vertical phase)；

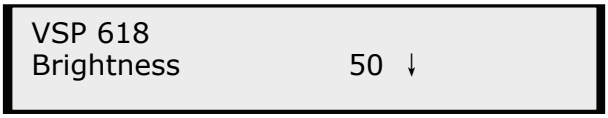
Set alpha

Enter Alpha sub-menu can set the alpha of video, Press UP /DOWN to set the value of alpha; Port A and Port B represent two video channels;

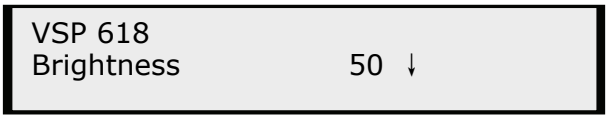


Set brightness contrast

BRT brightness and contrast button can set brightness and contrast of active window video shown as below pictures:



BRT brightness and contrast button can set brightness and contrast of active window video shown as below pictures:



Freeze Frame

Press FRE static frame button can freeze, press the button can freeze current active window image; You can make the screen switch between static and active with this button; Pictures show as below:

or

7.2 Set dual screen fade

1. Press Ⅰ/Ⅱ button to switch between single channel or dual channel. Menu is as follows：

2.Choose two input source from CV1、CV2、 CV3 、SVID、 DVI、YPbPr、VGA、SDI1、SDI2、HDMI and HDMI2.

3. Press AB button to realize dual screen fade.

CV1、CV2、 CV3 、SVID、SDI1 and SDI2 is small screen defaully, DVI、YpbPr、VGA、HDMI1 and HDMI2 is big screen defaully while realizing dual screen, If you want the two faded screens the same size, you can set the screen size by SCALE button. For LED users, who are familiar with studio operation can also set the display window on PC with studio software by the third party. And PC output by VGA or DVI, Use SCALE to make the CV1、CV2、 CV3 、SVID、SDI1 and SDI2 the same size as studio display window. AB button can quickly realize dual screen fade;

Step：Set the unit of zoom and move every time;

(Device default three step:1, 10,100)

HSize：set horizontal size;　VSize：set vertical size;

HPos：Set horizontal coordinates(horizontal phase)；

VPos：Set vertical size(vertical phase)；

Press LEFT/RIGHT keys or touch UP/DOWN，select menu; * in front of the menu means this menu is selected. Press SEL key, you can enter corresponding menu to set and view.

7.3 Displaying subtitles and LOGO

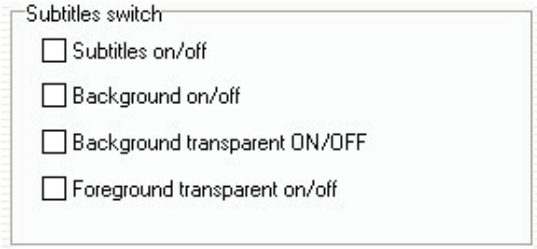
Users could add subtitles and Logo on the video by "set subtitle" option in "Video Processor" menu

- **Subtitles switch**

By "subtitles switch" function, users can choose whether to display subtitles and subtitles background on the video.

Note:	Subtitles show on top of the image without subtitle background.

Foreground transparency refers to subtitles's transparency and background transparency refers to subtitles background, which defaults to be 50% transparent, user can not adjust the value of this transparency.



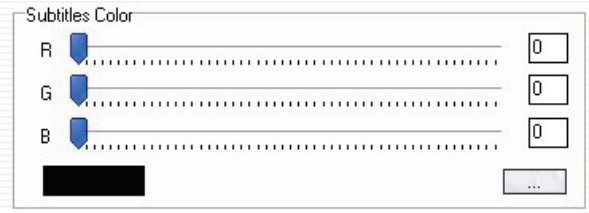
- **Displaying Subtitles**

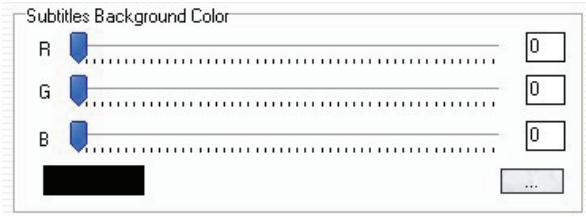
Fill in the subtitles blank with words that you need to show on display(eg. Advertising Slogans), maximum 80 characters allowed. Then click the "submit" button, subtitles will appear on the screen soon.

Note:	Size of subtitles is limited, Chinese fonts defaults to be Times New Roman and size is 24X24 (pixels); English font defaults to be Arial, size of 16X24 (pixels). The subitle font could not be modified at present.

- **Subtitles color or subtitles background color**

Users can change the subtitles color or subtitles background color through dragging the scroll bar by mouse or make choice in the color palette to select the right color





- **Subtitles movement**

Figuration of parameters in the "subtitles rolling" menu, subtitles could be rolling or static, at present, the device supports horizontal rolling(left or right) only, vertical rolling is not available at present.

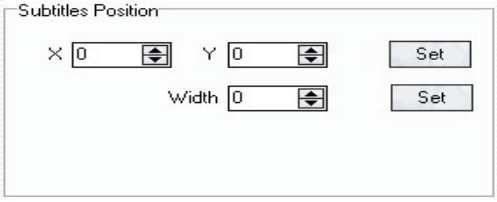
- **Subtitle rolling Speed**

Through dragging the scroll bar by mouse to set the speed of rolling subtitles.

- **Subtitles position**

By setting the value of horizontal or vertical coordinates, subtitles position on the screen can be adjusted.

Subtitles Width refers to the width of the subtitles display area. As long as the parameters have been set, subtitles will be displayed in the figurated area.



- **LOGO display**

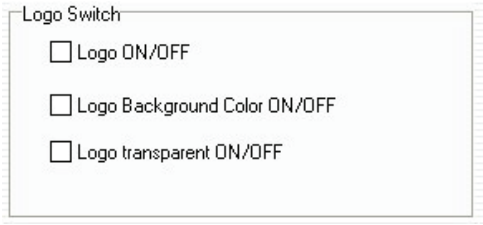
Users could made any LOGO displayed by the LOGO display function.

Users can choose whether to enable the LOGO display function according to circumstance.

When users select the "background color mark", the screen background color would be black and LOGO shows on it.

When users select "trademark transparent", LOGO would be translucent.

Note:	When users select "trademark transparent", LOGO would be translucent.
	The value of this transparency could not be modified.



Users could change the image format and pixels with

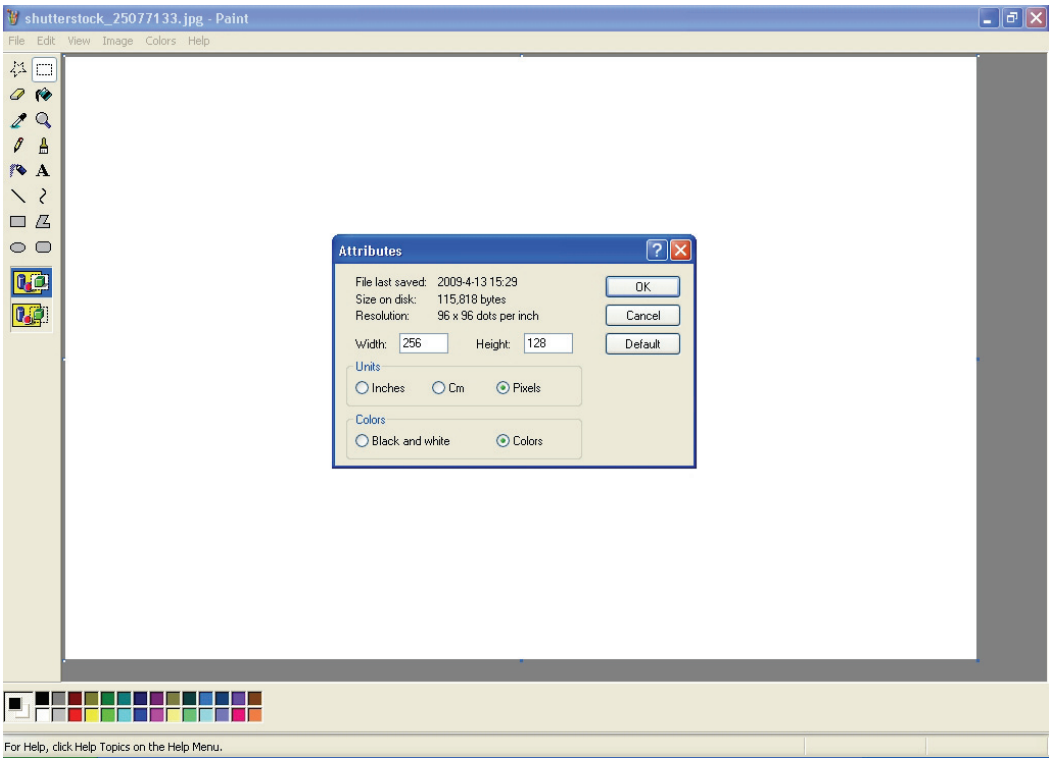
software in window OS. The picture would be cut on the right side and bottom if it is too big.

If the current picture is larger than the new size, the right side and the bottom part of the picture will be cut off in order to adapt to smaller areas.

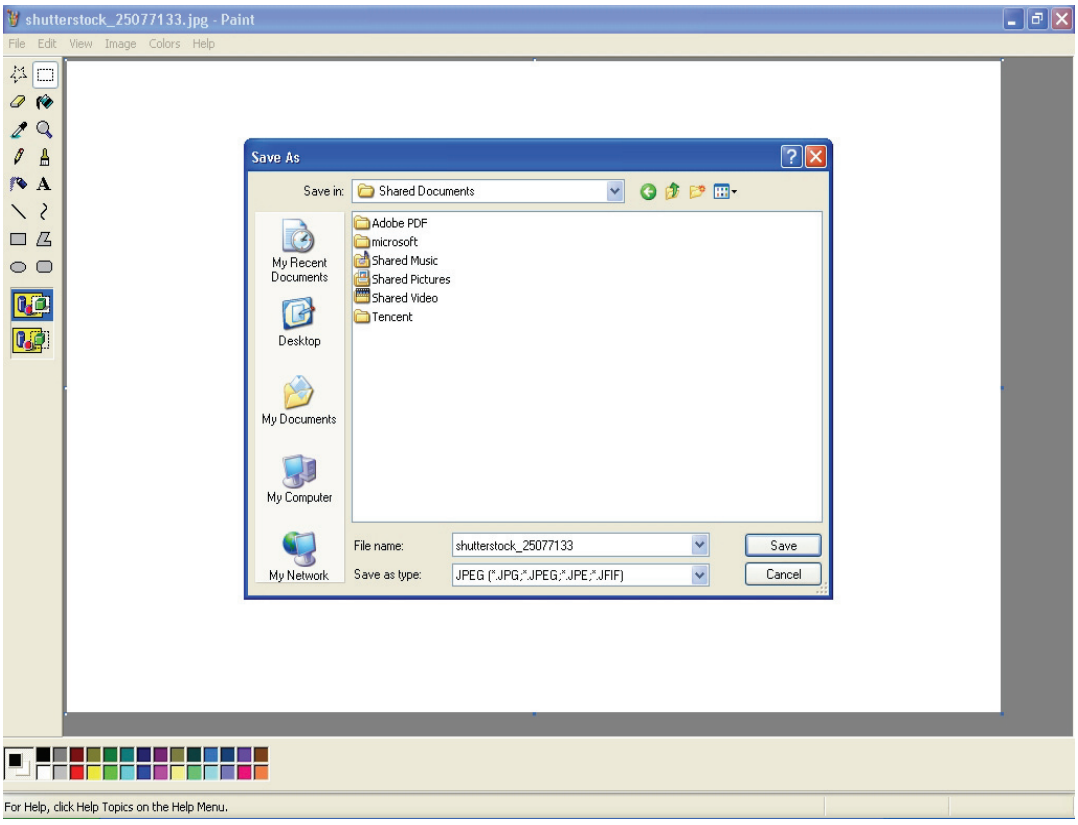
If the image is too big, users would have to cut the picture first. by the Toolbox.

Change image size, and then click "properties" on "image" menu, and select the width and height of the measurement in pixels. Enter the width and height values in the "width" and "height" box.

Note:	the device support only 16 bit color bitmap in bmp format with maximum pixels of 256X128



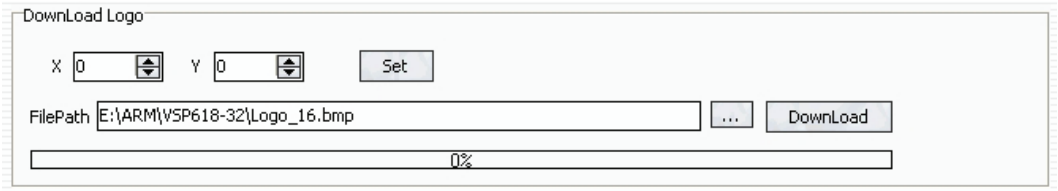
After LOGO picture was adjusted to specified size, save the image to 16 bit color bitmap bmp format.



- **Download LOGO**

After LOGO picture was adjusted to specified format and size, users could download it to the device, and then enable the LOGO display function, the LOGO would be displayed on the screen.

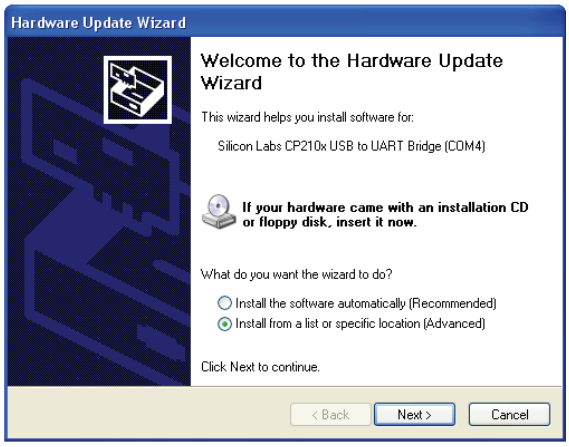
By setting the parameters of X or Y coordinates, LOGO position on screen can be adjusted.



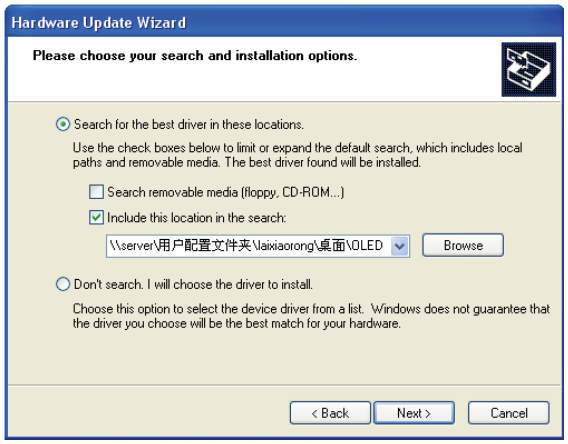
7.4 How to control processor with console software by USB?

1. Install the driver;

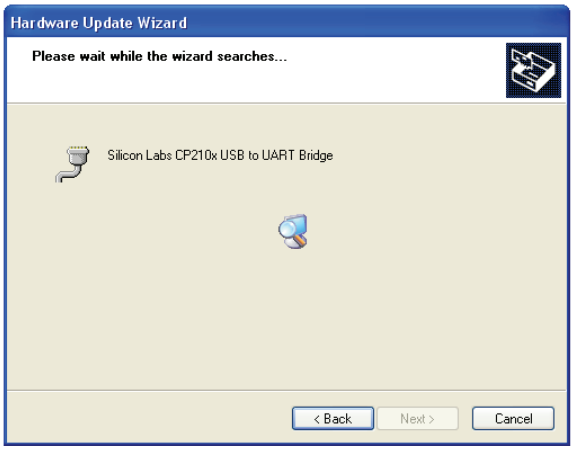
Connect the USB cable to the PC and the video processor. Turn on the VSP 618 for the first time to use USB, the PC will remind finding the new hardware and ask to install the driver for this new driver.

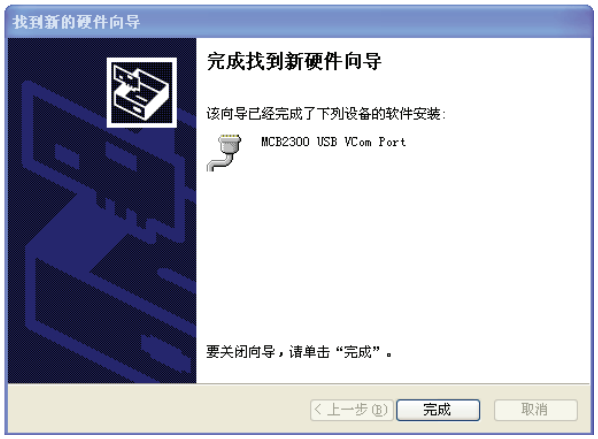

Hardware Update Wizard
Welcome to the Hardware Update Wizard
This wizard helps you install software for:
Silicon Labs CP210x USB to UART Bridge (COM4)
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Install from the list or specified location, press "NEXT":

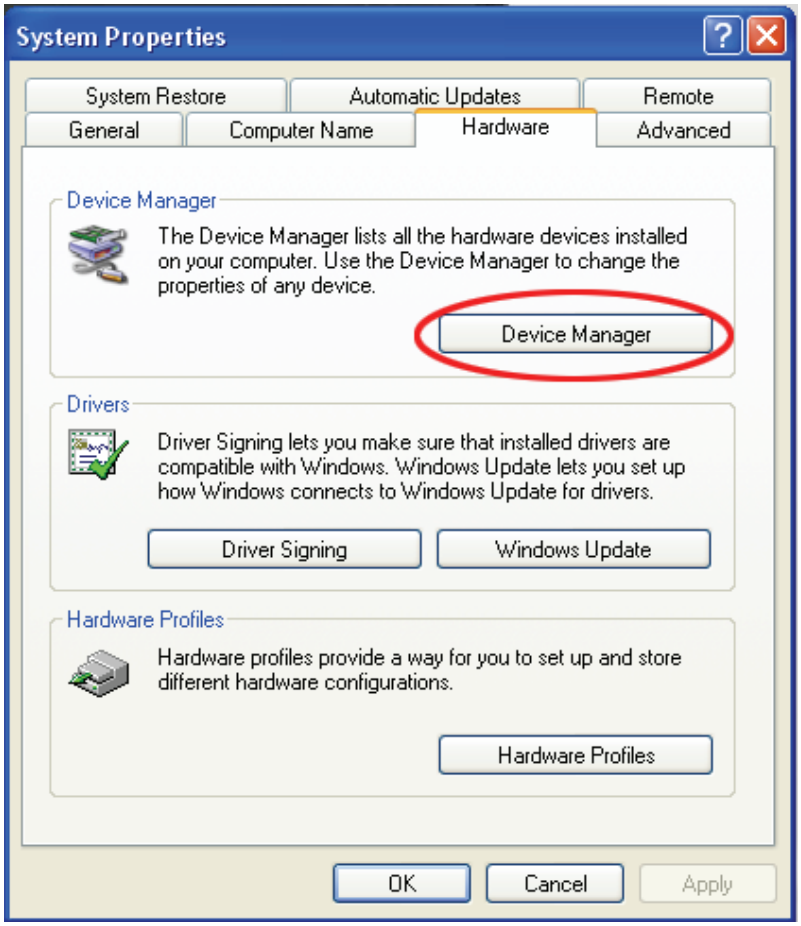

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
\\server\用户配置文件夹\laixiaorong\桌面\OLED
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

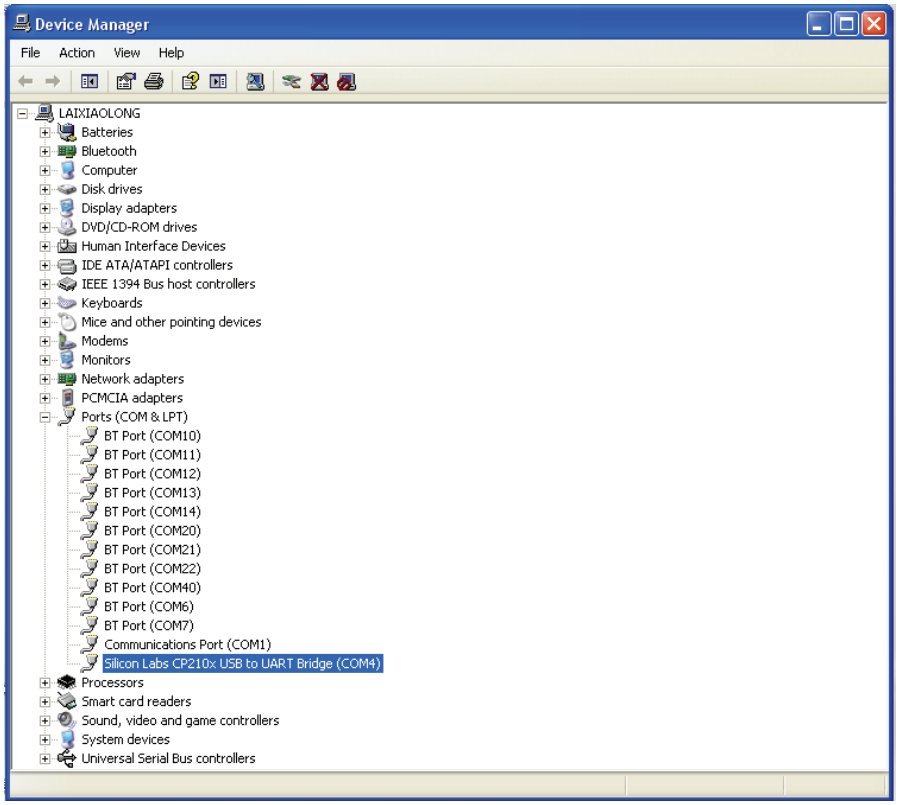
Press " browser" to find the driver, and press "NEXT"



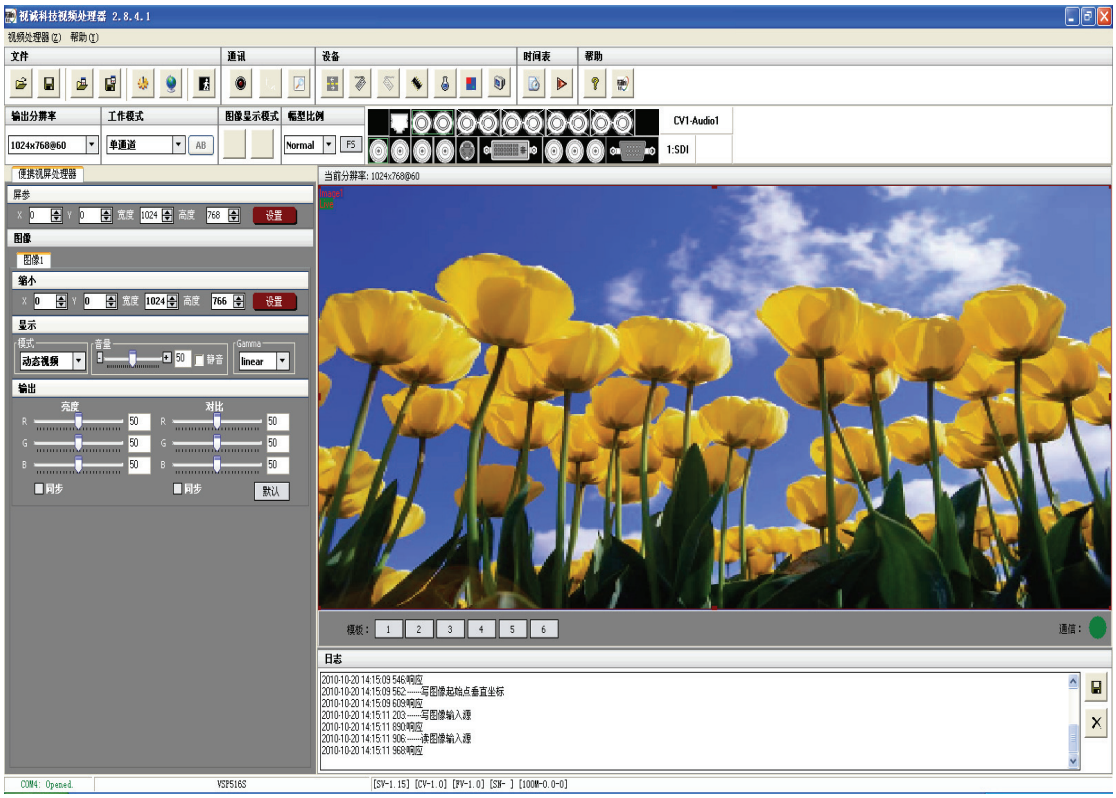


When the installation finish, can go to check the installed COM port inside the device management, as following picture show:

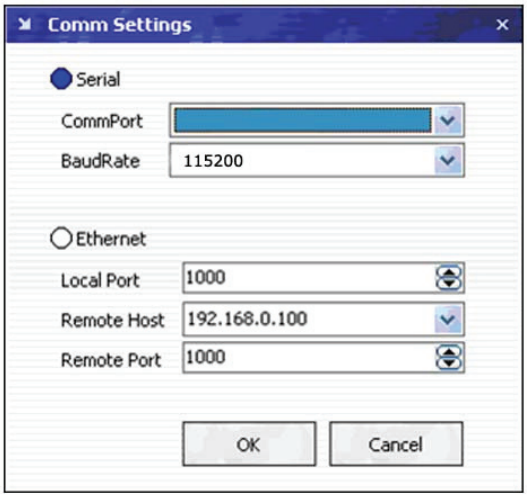

System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver Signing
Windows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles
OK
Cancel
Apply



2. Install the console software, and run after install, shows the interface of the console as following:



: Set the RS232 as installed just now, and set the VSP 618 Boud Rate to be: 115200.



Press to start RS 232 communication, when there is green point in the right down corner showing on the software, it means the communication is OK, and you can use the software to control the device now; the software operation is the same as VSP 618, just can see the difference of the SDI input;

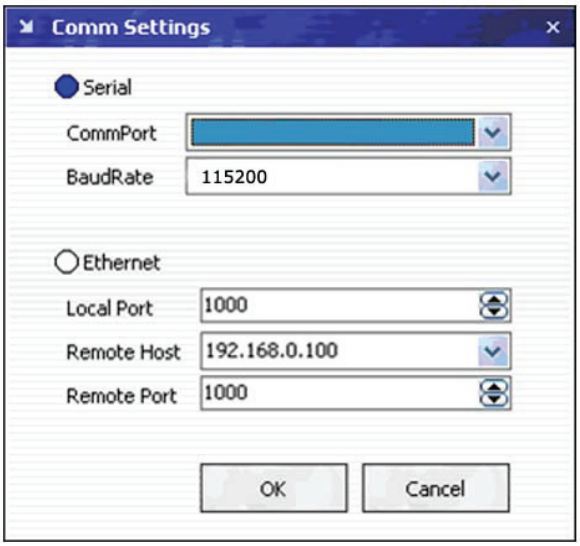
Note:	If power off during communication, should close the port by first, and plug in out of the USB and do communication again.

7.5 How to Use LINSN Ledset software?

1. First, Install AVDSP software and LINSN software.

2. Run AVDSP software;

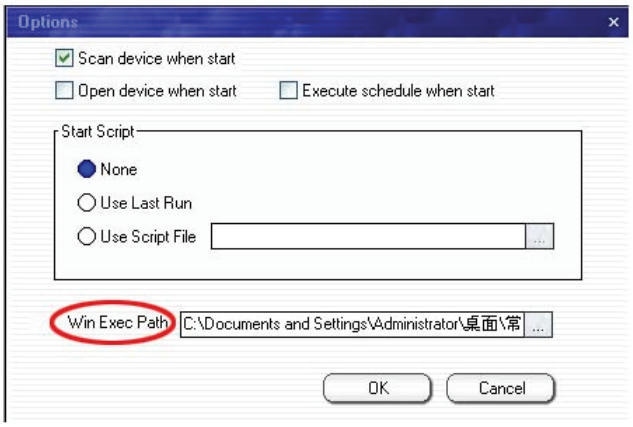
①Press to set the RS232. first choose the current RS232 you are using, then set the baud rate.

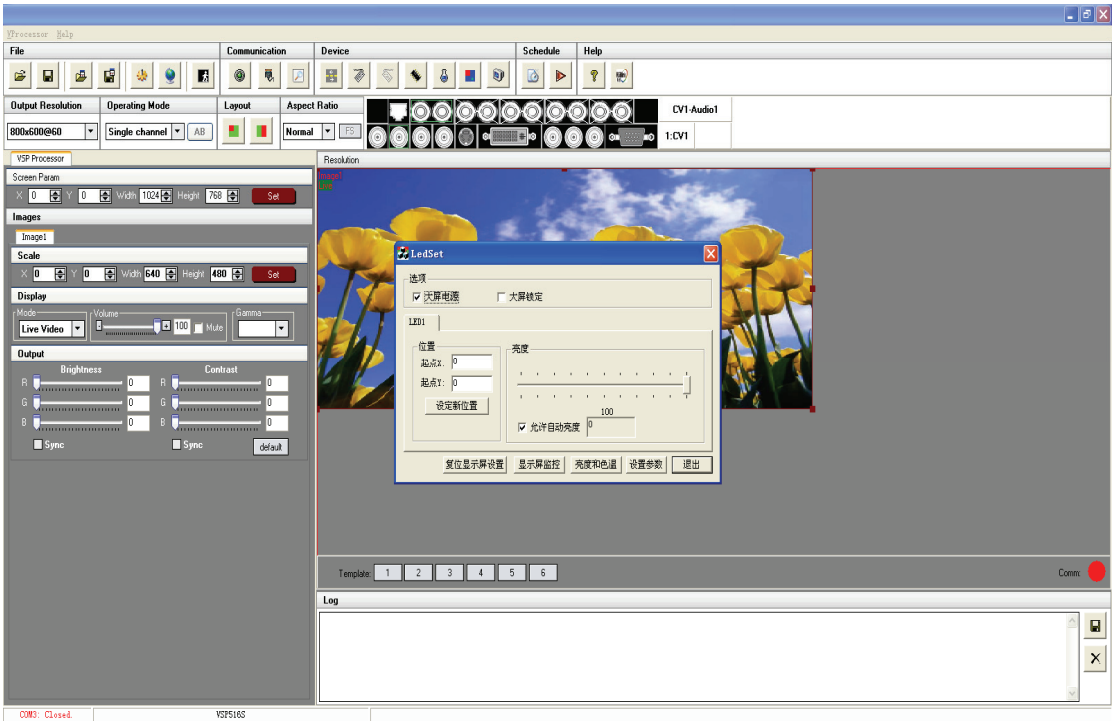


Note:	VSP516 and VSP516H Baud Rate work as 9600, while VSP516S Baud Rate work as 115200.

Press to start the RJ232, when the green point showing on the right down corner, it means the communication is successful.

Press :option. Find the LINSN software installation file LEDSET.EXE through "external progress route"as following picture:





As LINSN software will use RS232 for communication too, so user should first close AVDSP console software RS232 communication after that press ;

If in used , then to start the LINSN software. When you want to use AVDSP software, you just need to close LINSN software, start the RS232 again.

Note::	Before using AVDSP console software to execute the LINSN software, you should first internally connect the device's 100M board with sending card. Any question, please feel free to contact our customer service engineer.

8.0 Appendix

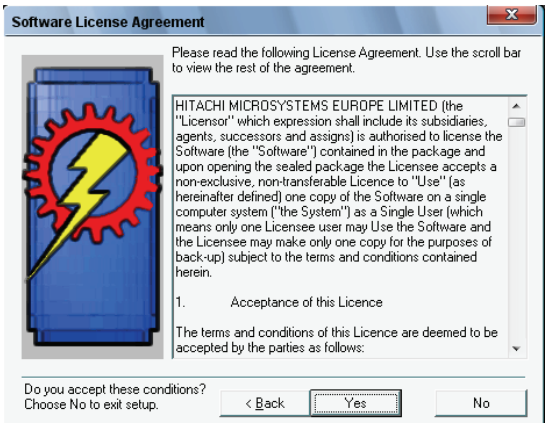
8.1 Appendix Ⅰ Download the main board software

- **Installation**

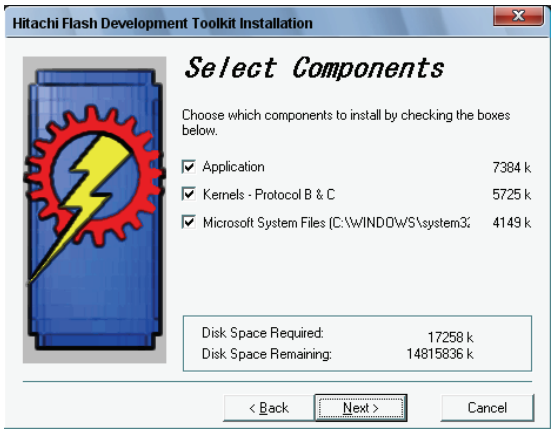
Double-click fdt2_2 setup.exe.

Hitachi Flash Development Toolkit Installation
Welcome!
This installation program will install the Hitachi Flash Development Toolkit v2.2.
Press the Next button to start the installation. You can press the Cancel button now if you do not want to install the Hitachi Flash Development Toolkit at this time.
Read Release Notes
< Back
Next >
Cancel

Click the next button.


Software License Agreement
Please read the following License Agreement. Use the scroll bar to view the rest of the agreement.
HITACHI MICROSYSTEMS EUROPE LIMITED (the "Licensor" which expression shall include its subsidiaries, agents, successors and assigns) is authorised to license the Software (the "Software") contained in the package and upon opening the sealed package the Licensee accepts a non-exclusive, non-transferable Licence to "Use" (as hereinafter defined) one copy of the Software on a single computer system ("the System") as a Single User (which means only one Licensee user may Use the Software and the Licensee may make only one copy for the purposes of back-up) subject to the terms and conditions contained herein.
1. Acceptance of this Licence
The terms and conditions of this Licence are deemed to be accepted by the parties as follows:
Do you accept these conditions?
Choose No to exit setup.
< Back
Yes
No

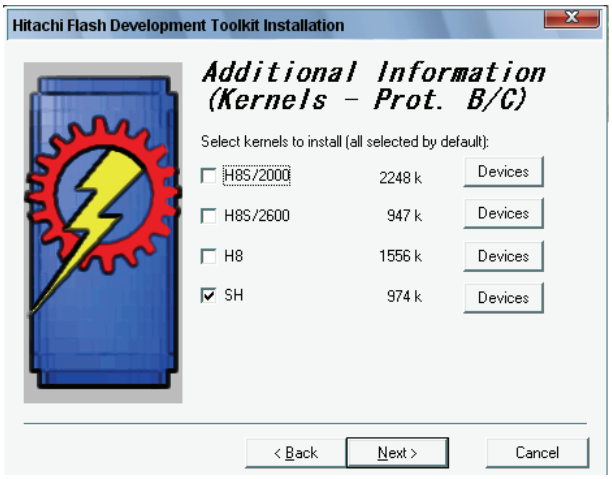
Click the yes button.


Hitachi Flash Development Toolkit Installation
Select Components
Choose which components to install by checking the boxes below.
Application 7384 k
Kernels - Protocol B & C 5725 k
Microsoft System Files (C:\WINDOWS\system3 4149 k
Disk Space Required: 17258 k
Disk Space Remaining: 14815836 k
< Back
Next >
Cancel

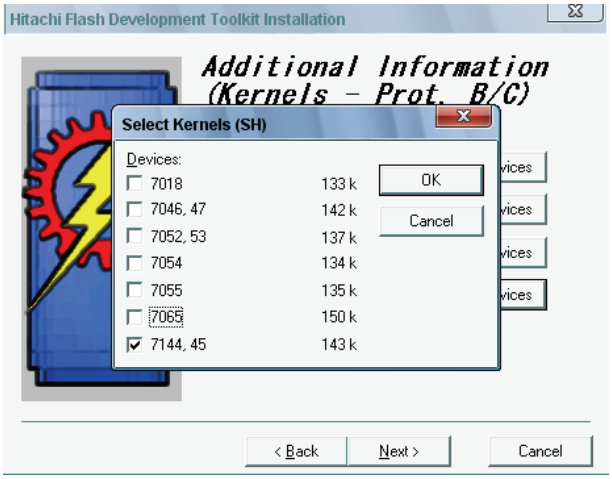
Click the next button.

Hitachi Flash Development Toolkit Installation
Additional Information (Application)
Clear product's registry entries before installing
If there are entries for this product already present in the registry, clearing these entries will provide a clean installation.
Register online
Opens your default browser at a web page to register this product.
< Back
Next >
Cancel

Click the next button.


Hitachi Flash Development Toolkit Installation
Additional Information (Kernels - Prot. B/C)
Select kernels to install (all selected by default):
H8S/2000 2248 k Devices
H8S/2600 947 k Devices
H8 1556 k Devices
SH 974 k Devices
< Back
Next >
Cancel

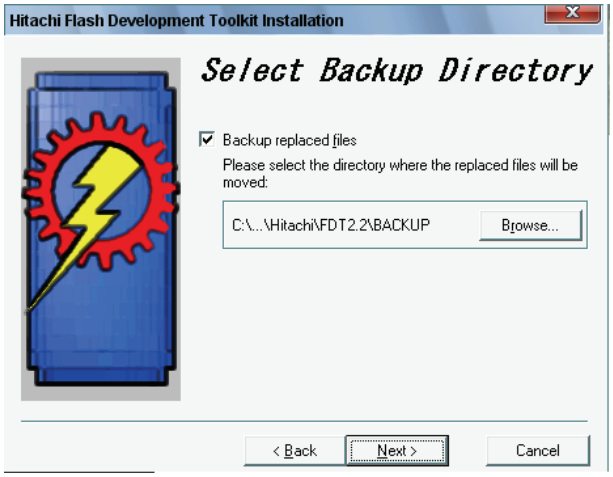
Unselected the H8S/2000, H8S/2000, H8. Click the next button.



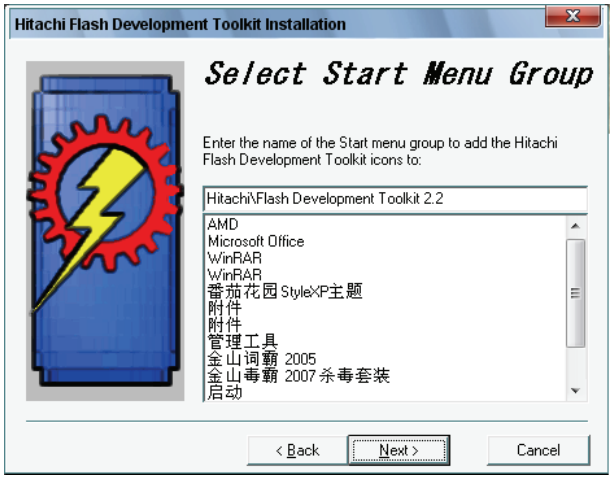
Select 7144.45, Click the OK button.

Hitachi Flash Development Toolkit Installation
Select Destination Directory
Please select the directory where the Hitachi Flash Development Toolkit files are to be installed.
'Free Disk Space After Install' is based on your current selection of files to install. A negative number indicates that there is not enough disk space to install the application to the specified drive.
C:\Program Files\Hitachi\FDT2.2
Browse...
Current Free Disk Space: 14822092 k
Free Disk Space After Install: 14804720 k
< Back
Next >
Cancel

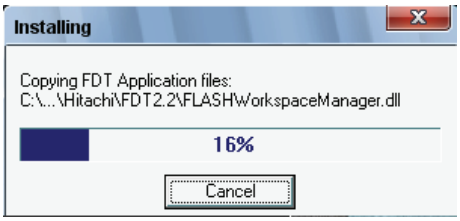
Select the location by browse. Click the next button.



Click the next button.



Click the next button.

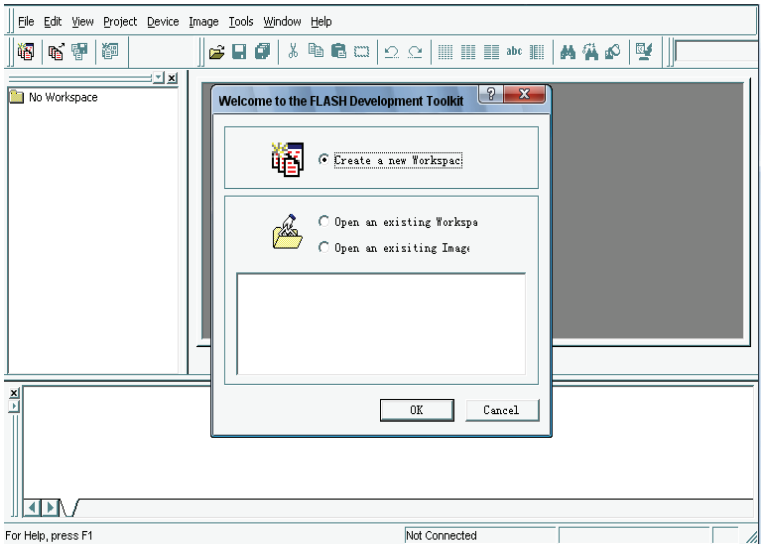


Hitachi Flash Development Toolkit Installation
Installation Completed!
The installation of the Hitachi Flash Development Toolkit has been successfully completed.
Extra information is available on our website:
http://www.hmse.com
To uninstall this update, use the Add/Remove Programs icon in Control Panel, and select "Hitachi Flash Development Toolkit" from the list.
Press the Finish button to exit this installation.
< Back
Finish
Cancel

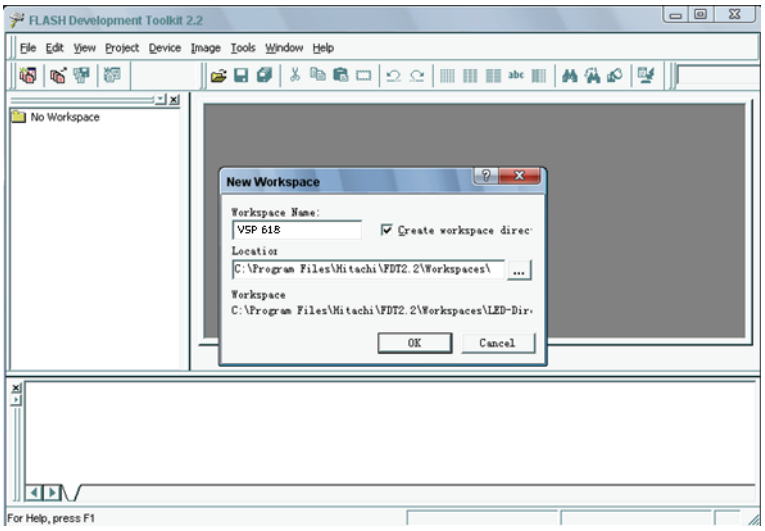
Click the finish button. It's ok.

- **Download**

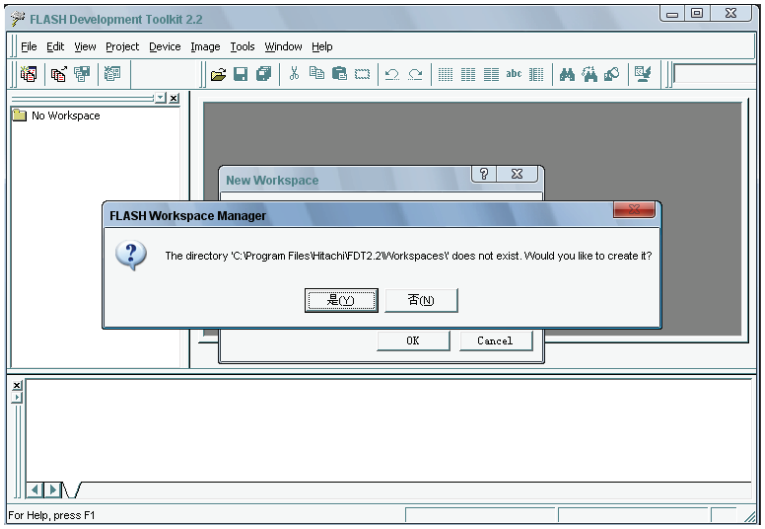
Open the Flash Development Toolkit 2.2.



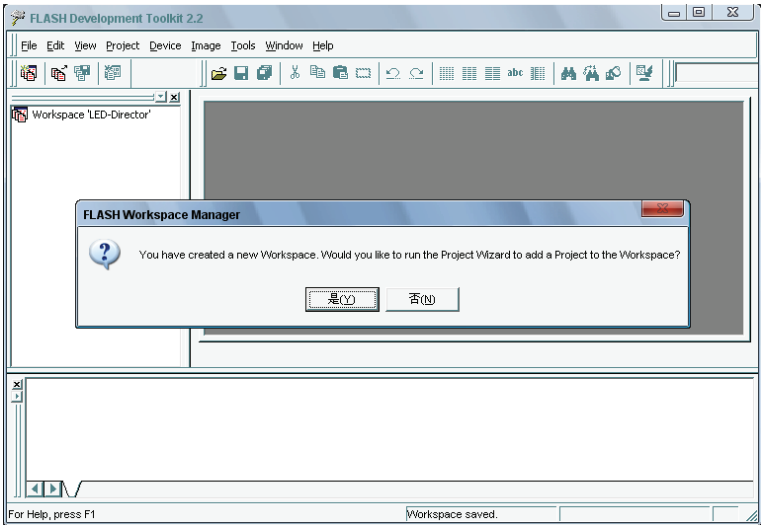
Click the OK button.



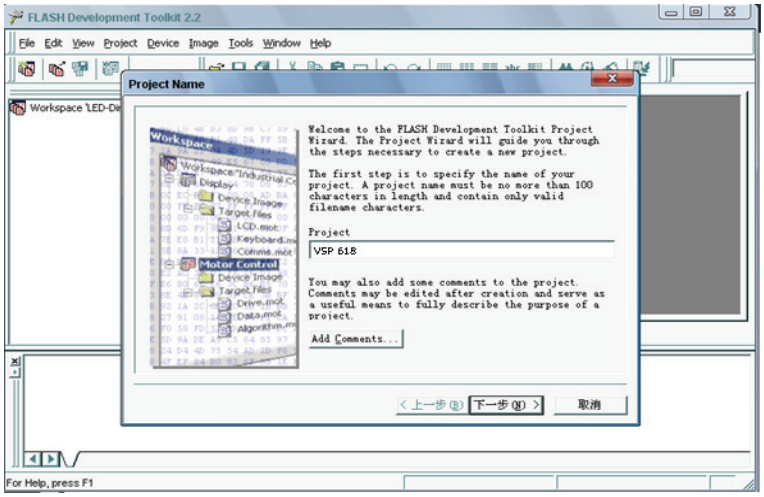
Fill the name. Click the OK button.



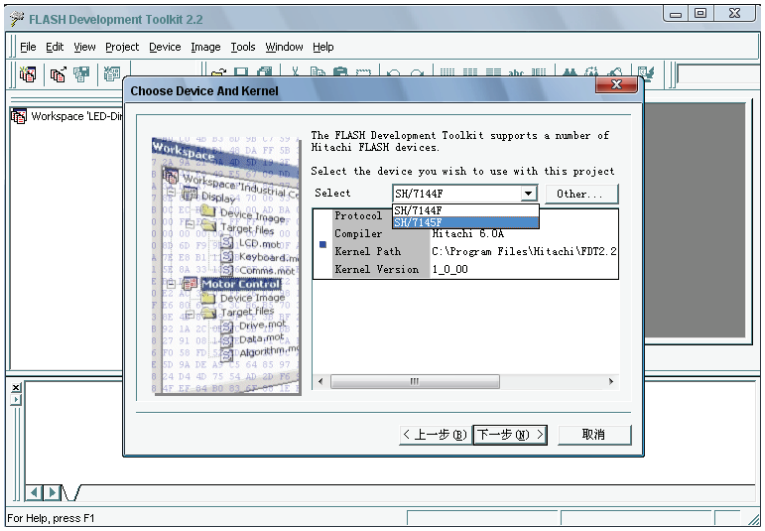
Click the （Y）button.


FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Workspace 'LED-Director'
FLASH Workspace Manager
You have created a new Workspace. Would you like to run the Project Wizard to add a Project to the Workspace?
是(Y)
否(N)
For Help, press F1
Workspace saved.

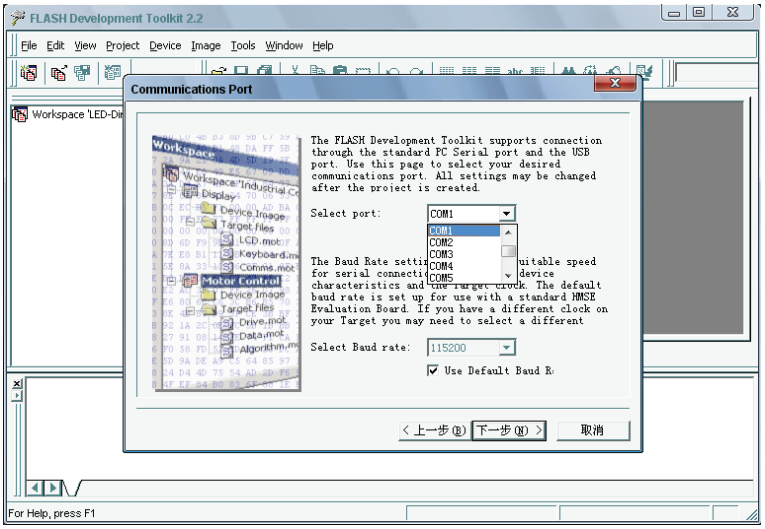
Click the （Y）button.


FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Project Name
Welcome to the FLASH Development Toolkit Project Wizard. The Project Wizard will guide you through the steps necessary to create a new project.
The first step is to specify the name of your project. A project name must be no more than 100 characters in length and contain only valid filename characters.
Project
VSP 618
You may also add some comments to the project. Comments may be edited after creation and serve as a useful means to fully describe the purpose of a project.
Add Comments...
< 上一步(B)
下一步(N) >
取消
For Help, press F1

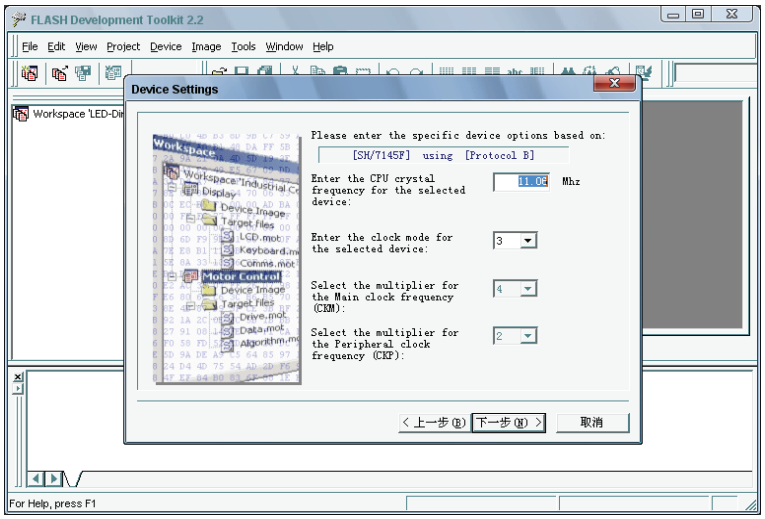
Fill the name. Click the OK button.



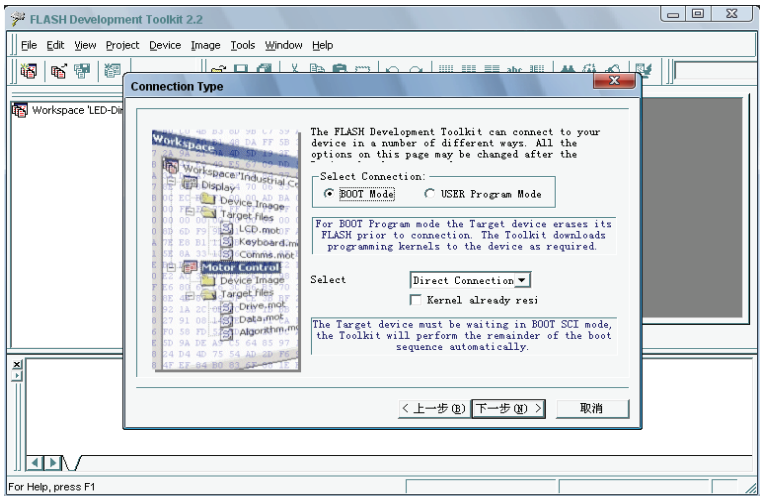
Select the sh/7145f. Click the next button.


FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Communications Port
The FLASH Development Toolkit supports connection through the standard PC Serial port and the USB port. Use this page to select your desired communications port. All settings may be changed after the project is created.
Select port:
COM1
COM2
COM3
COM4
COM5
Select Baud rate:
115200
Use Default Baud R
< 上一步(B)
下一步(N) >
取消
For Help, press F1

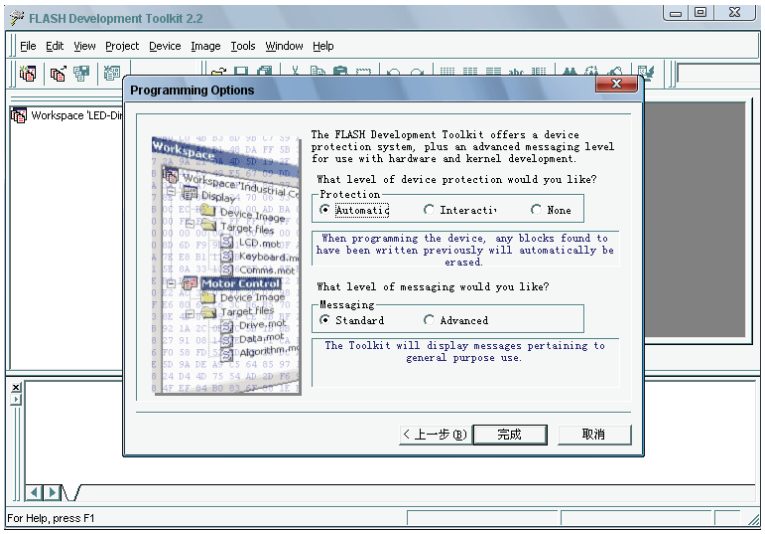
Select the COM port. Click the next button.


FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Device Settings
Please enter the specific device options based on:
[SH/7145F] using [Protocol B]
Enter the CPU crystal frequency for the selected device:
11.05
Mhz
Enter the clock mode for the selected device:
3
Select the multiplier for the Main clock frequency (CRM):
4
Select the multiplier for the Peripheral clock frequency (CKP):
2
< 上一步(B)
下一步(N) >
取消
For Help, press F1

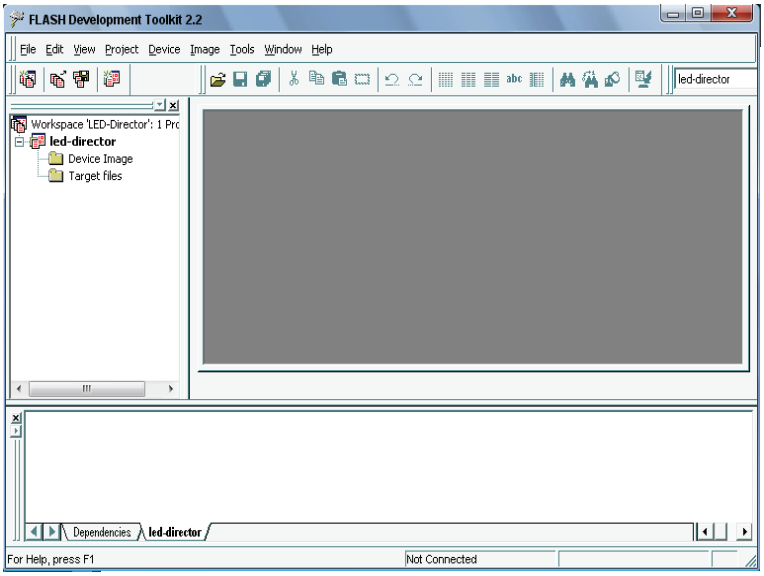
Click the next button.


FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Connection Type
The FLASH Development Toolkit can connect to your device in a number of different ways. All the options on this page may be changed after the
Select Connection:
BOOT Mode
USER Program Mode
For BOOT Program mode the Target device erases its FLASH prior to connection. The Toolkit downloads programming kernels to the device as required.
Select
Direct Connection
Kernel already resi
The Target device must be waiting in BOOT SCI mode, the Toolkit will perform the remainder of the boot sequence automatically.
< 上一步(B)
下一步(N) >
取消
For Help, press F1

Click the next button.

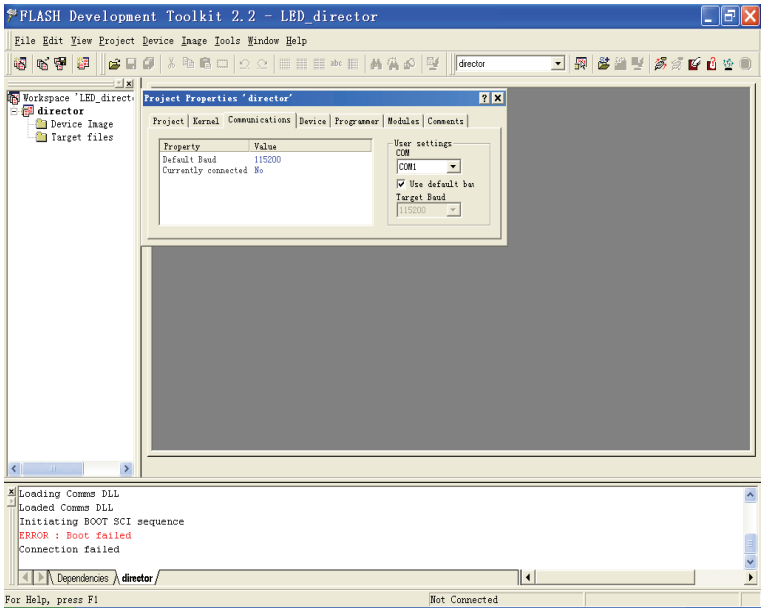

FLASH Development Toolkit 2.2
File Edit View Project Device Image Tools Window Help
Programming Options
The FLASH Development Toolkit offers a device protection system, plus an advanced messaging level for use with hardware and kernel development.
What level of device protection would you like?
Protection
Automatic
Interacti
None
When programming the device, any blocks found to have been written previously will automatically be erased.
What level of messaging would you like?
Messaging
Standard
Advanced
The Toolkit will display messages pertaining to general purpose use.
< 上一步(B)
完成
取消
For Help, press F1

Click the finish button.

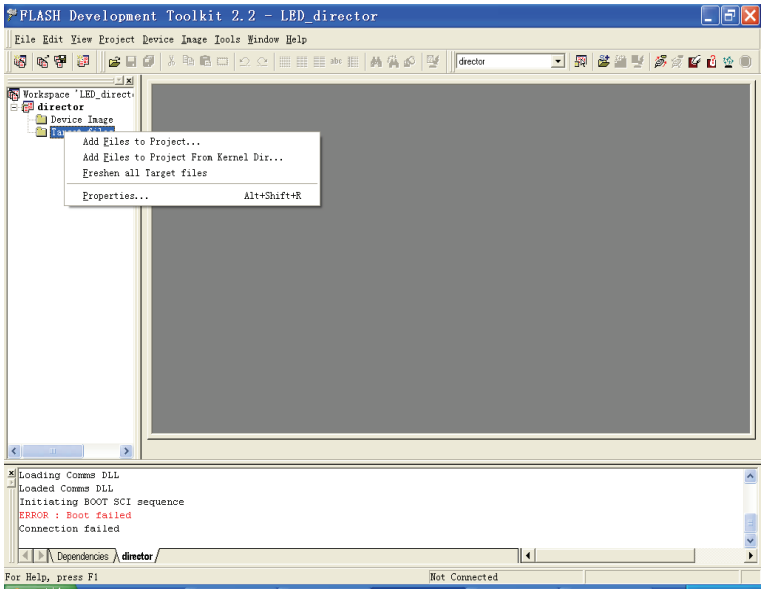


Select project/properties/communications. select the COM port in user setting.

Do not check User default baud rate and select Target Baud as 9600.

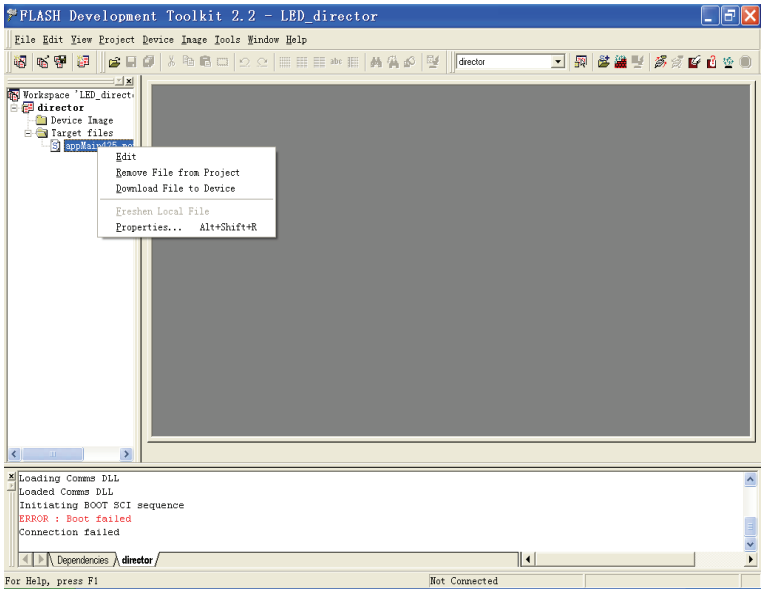


Click the target files by the right mouse. Select add files to project , and select user *.mot.



Connect the computer and AVDSP Series, select *.mot. Download file to device. After the equipment power up, right-click the ".mot" file at the left side of menu, when the screen shows "waiting for update", you can update the main board program. Next, choose the "download file to device", start to loading.

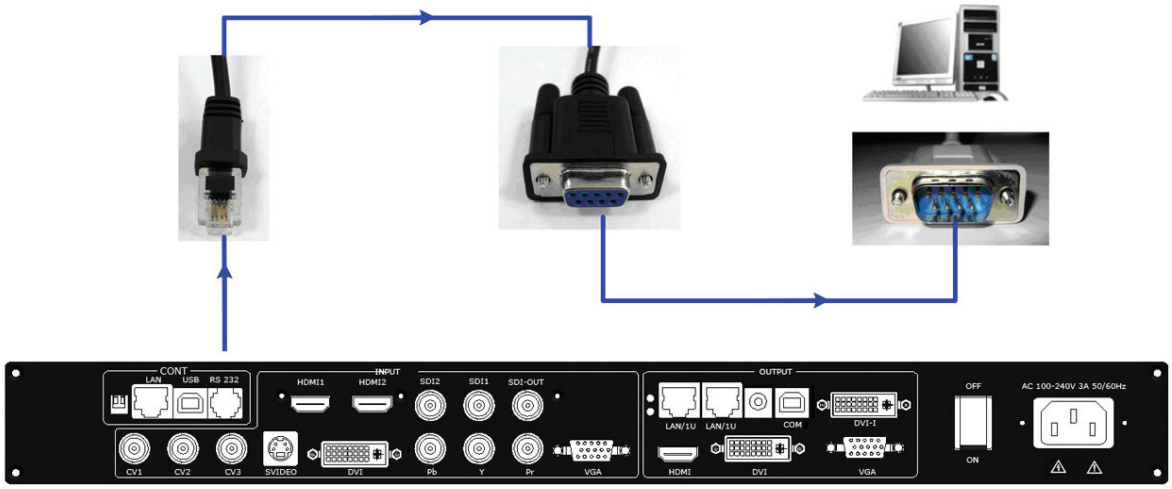
After update, the device will auto run into operation mode without reset process.



8.2 Appendix II Download the IP software

Turn off the power, take the two coding switch to "ON" sate. As below:

Connect one side of the RJ11 download line to the RS232 on the video processor, and the other side to be connected to the serial port on the PC.

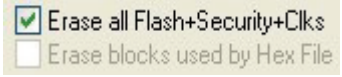


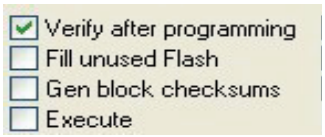
Double click

to run Flash Magic ,setting as below:

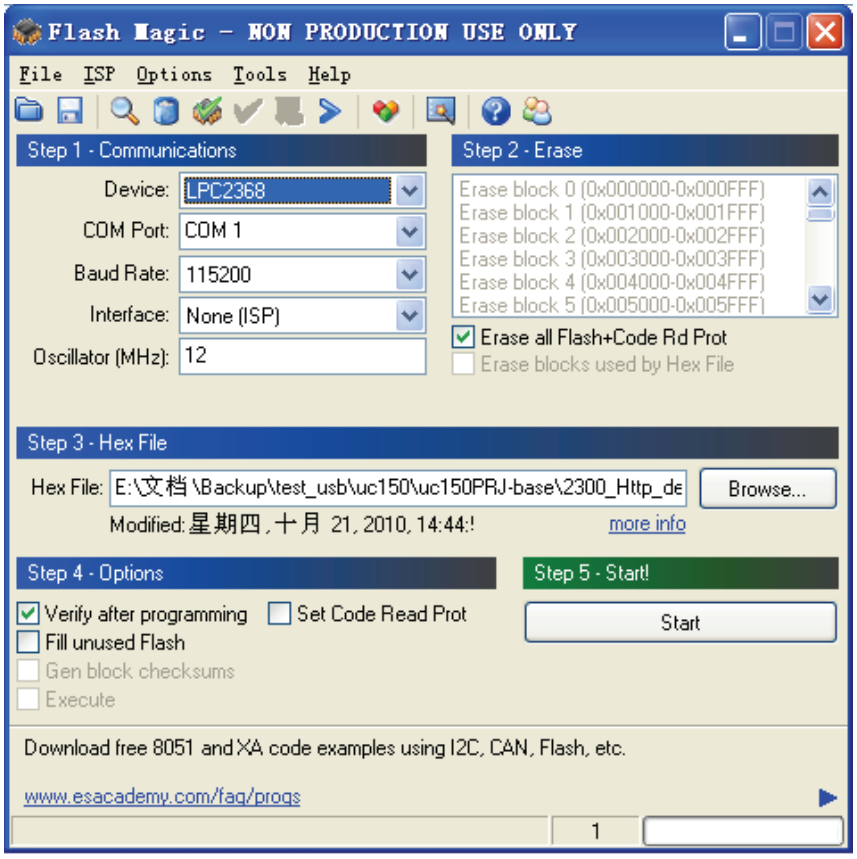
First, users can choose the right serial port, set the baud rate to 115200, choose LPC2368,and to load the aim document (hex.document) of IP board upgrading.

Secondly, confirm the two option box by tick.





Finally, click the “Start” button.



After download, exit the program, turn off the power, tack the two coding switch back, as below, restart the equipment power, check if the equipment work normally.

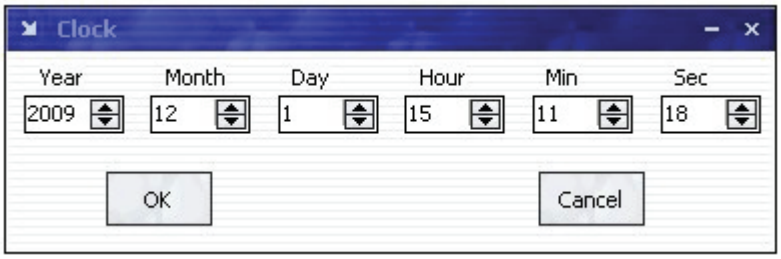
Note:	Flash Magic download website:
	http://rgblink.com/_d269872174.htm

8.3 Appendix Ⅲ How to add tasks.

Use "Device Schedule" can add tasks，make device automatically run to the Schedule input source in specified time or schedule display modes such as fade in and out.

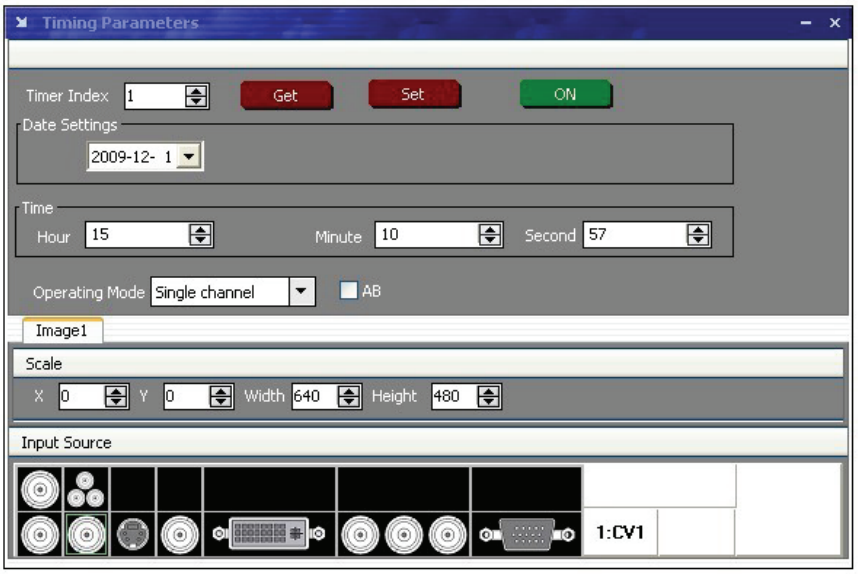
- First of all，set lower computer current time through host computer "clock".

Note：	Reset to factory settings after setting the clock will affect the time before.



After Clock setting, users can check whether successfully set through button. Press MENU button to enter system main menu, then press Dev Info (device information), then press SEL button can show device information. Touch /DOWN，check in the System time. Shown as below picture：

- After device clock set, add task plan through" Timing Parameters".



1. Users need to start "time-enabled" before using" timing device". If you forget to start, time set may fail.

Click "start" button

, when the button changes to

, it means time can start.

Press MENU button can enter system main menu, touch UP/DOWN to enter advanced menu, shown as the picture:

Press SEL button to enter advanced menu

2. When the timer count is set to 1, it indicates that the setting contents will be stored in the "timing 1". If you need to set more, you can set up one by one and saved in different "Timer index".

Note:	Equipment currently supports 10 task scheduler.

3. Set "task schedule" playing time, can up to second.

4. Select the signal source to play works in dual channel or single channel mode, and check whether to use fade during dual channel mode.

5. Users can control the image position and size by change the data or click the drop-down arrow.

6. When device works under the single channel mode, click the interface Icon. Red box indicates current interface has been selected as the input interface;

When device works under the dual channel mode, need to switch image 1 and image 2 set input signal one by one.

Users can see the image 1 and image 2 input source information in the input source toolbar after setting. Shown as the picture:

7. When you finished above step, click button Set to finish adding" tasks plan".

Click button Get, you can see the input source, playing time, image size, position etc. of the current "tasks plan"

Users can see all the "tasks plan" relevant content through "Timer index" switching Timer Index 1.